Figure 1.01

THE VIABILITY

OF

BRITISH URBAN TRANSPORT PLANNING

IN

THE POST BUCHANAN PERIOD

- A SYSTEMATIC STUDY -

by

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A ROAD TO NOWHERE!

Figure 1.01

A ROAD TO NOWHERE!

Figure 1.01

C C N T E N T S

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NOTE: All figures, graphs and tables in this thesis are referred to as figures. However in the text, when reference is made to a table, the figure number is followed by the word 'table' in brackets, e.g. FIGURE 7.05 (table). Graphs are treated in a similar manner.

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SUMMARY

Long term transport plans produced by county borough councils between 1960 and 1974 had low implementation. This thesis examines the degree and likely causes of low-implementation in a detailed and systematic manner. The findings are then used to recommend improvements to structure and local planning including transport planning. The thesis is in five parts. Part I begins with justifications for the research. In Chapter II, the landuse-transport planning process in its historical context is comprehensively presented. Research by others has been used in Chapter III to identify key factors affecting implementation. These may be grouped as: (1) Institutional - e.g. local government re-organisation (2) Shortage of funds. (3) Socio-political. (4) Inaccurate transport provision and forecasting. The first three groups are further distinguished between national and local factors. In Chapters 4 and 5 the following two measures are developed to assess implementation. FMR is a ratio of plans recommended and implemented TO recommended infrastructure in plan for a given period. FMQ measures recommended and implemented works AS A proportion of total capital works undertaken, FMQ is satisfactory but FMR is low. Parts II and III examine the causes for low FMR. Part II, (Chapters 7 to 9 examines national factors - shorage of funds, political and pressure group resistances and technical deficiences as reasons. Part III examines local factors - shortage of funds, changes in political control in councils, public resistance and chief officers' influences. In each case variations in local factors and variations in FMR are correlated. The last three factors together explains nearly 90 percent of the variation in FMR. In Part IV chapter 15 deals with changes in influence of factors, in the post-1974 period and chapter 16 concludes implementation analysis. In Part V (the last 4 chapters) present day landuse-transport planning is critically reviewed and improvements are outlined.

PART ONE

INTRODUCTION TO IMPLEMENTATION ANALYSIS

CHAPTER

(i) INTRODUCTION

(ii) LANDUSE TRANSPORT PLANNING IN ENGLAND - A CALENDAR OF EVENTS

(iii) IDENTIFICATION OF KEY FACTORS AFFECTING THE IMPLEMENTATION OF PLANS

(iv) THE IMPLEMENTATION RATIO : A NEW MEASURE FOR ASSESSING TRANSPORT PLANNING

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CHAPTER ONE

INTRODUCTION

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1.1 SCOPE OF THE RESEARCH

1.2 NOTES

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This thesis is about "Roads to nowhere". In it, I seek to explain why there has been large scale rejection of long-term road plans published in the last two decades.

The rejection has led to a number of problems for the provision of transport.

(i) Following such rejection, transport authorities have undertaken their task based more on political dogma and less on analysis. This approach is disturbing because it has led to mistakes which particularly in urban transport provision cannot be easily rectified and are normally expensive. For example, in 1981, the Labour controlled Greater London Council substantially rejected the transport provisons contained in the approved Greater London Development Plan and introduced the "Fare is Fair" scheme to subsidise public transport fares by income from rates. The scheme was challenged and was rejected by the House of Lords in 1982 as illegal. This rejection has led to abnormal fare increases in London for fairly small savings to rate-payers.

(ii) The rejection of plans has impeded the development of suitable urban transport planning procedures. This in turn has led to the filling in of the vacuum by procedures more suited to rural areas. For instance the cost-benefit analysis computer program (COBA) at present recommended by the Department of Transport for the justification of urban roads, was developed essentially to assess inter-urban projects and is only suitable for the latter purpose. Such unrealistic approaches to urban transport planning have resulted in loss of public credibility of the planners. This in turn has led to the rejection of even valid professional advice.

(iii) The absence of a co-ordinated transport policy has been a major cause of the spiralling fares and service deterioration experienced in public transport. This has resulted in hardship, especially to the poor who are captive to public transport and has encouraged the growth of private car-ownership with its consequent environmental and social problems. The need to maintain some public transport services for the captives has resulted in a rapid rise in revenue-support costs.

(iv) A number of transport planning processes that were rejected in the United States in the 1950's and in Europe in the last two decades are now being applied with greater vigour in developing countries.[1] These exercises in planning are expensive and it is morally wrong to sell them wihout understanding properly their limitations.

1.1 SCOPE OF THE RESEARCH

In Great Britain many urban transport plans were produced in the 1960's and early 1970's but little research has been undertaken to assess their achievements.[2,3] In this research, I examine the degree and the likely causes of under-implementation of plans in a detailed and systematic manner.

Transport is a function of land-use which is very much influenced by other central and local planning functions as well as private decisions. In chapter two of this thesis, this inter-related scene is set within a historical context. An analysis of recent related research is presented in chapter three. This analysis is used to identify those factors that are likely to have influenced the implementation of plans. The bulk of my research (chapters 4 to 14) is concerned with assessing the influence of individual factors on the implementation of urban transport plans published before 1972. A statistical assessment is then made of the cumulative influence of the more important factors. In chapter 16, I have examined the applicability of the findings in the post - 1974 period under the re-organised system of local government. Chapters 16 to 20 forms a post-script to the thesis. In here, I recommend in out-line, a new planning method that explicitly takes into account the more important factors in order to improve the present day land-use - transport planning process (structure plan, local plan, transport policies and programmes system) presently used in G.B. The post-script is concluded with a short discussion on further research resulting from my study.

Although all the statistics used in this research is drawn from English records, Wales uses an identical planning system and Scotland, a system similar in many respects to England. I have therefore no reason to believe that the findings are not applicable throughout G.B.

* * * *

1.2 NOTES

1. For instance, during May 1982 extensive traffic surveys were conducted in Port Moresby - the capital city of Papua New Guinea. The surveys were intended to identify traffic problems the city could face over the next 20 years and to base recommendations for an improved future road network. POST-COURIER (21 May 1982) Port Moresby, Papua New Guinea Post-Courier, P.O. Box 85; p. 3.

2. I estimate that some 140 long-term transport plans (excluding transport studies completed solely for the preparation of structure plans) were published in U.K. during the last two decades.

   A bibliography of these and other surveys and plans published before 1975 is given in; Headquarters Library : Department of the Environment (1975) NATIONAL INDEX OF TRAFFIC AND TRANSPORTATION SURVEYS : INFORMATION SERIES.
   London SW13EB, 2 Marsham Street.

3. In 1965, the cost of a typical study in a major conurbation was estimated by the Ministry of Transport as over 0.25 million (1.30 million in 1982 values). Minister of Transport (1965) ROADS IN ENGLAND AND WALES. London, H.M.S.O.: p. 22.

CHAPTER TWO

LANDUSE TRANSPORT PIANNING IN ENGLAND - A CALENDAR OF EVENTS

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2.1 Calendar of Events

2.2 Notes

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"The problem which we have at present time is how to adapt the resources of our modern civilisation to an environment which has been produced by our old civilisation. The fact is that we have an old centre through which we are trying to drive our modern tram cars and so on, and we find it impossible to do it. We have to cut and carve and rearrange things."

Councillor Marr: Manchester City Council, 1910[1]

The problem of balancing landuse against transport provision precedes the motor car. In this chapter, my aim is to trace the historical developments that led to the publication of urban, landuse - transport plans and to their subsequent rejection. Presently, there is no comprehensive treatise on the post-war history of urban-transport planning in the United Kingdom. Therefore I have compiled this chapter more thoroughly than is necessary to set the historical context for this thesis.

The presentation that follows is self-explanatory, however the following points are worth noting. Firstly, the events are presented in date order. Events that occurred during the same period in a variety of fields such as central and local government, general transport planning, road planning etc are given in the same row.

Secondly, discussions and comments on items of interest are given in the last column. The items in Column 1 to 4 to which a comment refers to are marked with asterisks (*) at the end of the items. The intention is that the comment should be read directly after the items in a row ending with asterisks.

Thirdly, in the UK, the solution prescribed in the mid-60s to overcome urban congestion was to provide an extensive network of motorways. Nearly two decades before, in the USA, urban dwellers experienced similar congestion problems. Urban motorways were

initially prescribed in the USA to overcome congestion. The results were unsatisfactory. I have therefore taken this opportunity to draw parallels between the events in the USA and similar events in the UK. A review of events in the USA is also of interest in another respect. It was in the States that many advances were made in landuse-transport planning methods. These methods without much validation were imported for application in British towns.

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CENTRAL & LOCAL GOVERNMENT	TRANSPORT PLANNING	ROAD PLANNING	OTHER EVENTS OF INTEREST	COMMENTS On items marked with * in a column to the left
19th Century was a period of laissez-faire enterprise in which the role of the Government was to remove obstacles of all forms to business and commercial activities.	Canal monopolies in the 18th and early 19th Centuries overtaken by railways for goods and most passenger traffic.	Parishes provided and maintained roads by compulsory labour		
		Highways Act 1835*	John Macadam (1798-1861) Thomas Telford (1757-1834)*	The 1835 Act introduced the highway rate system where parishes charged road users by intercepting at turnpikes. Improved road construction techniques were introduced by Macadam and Telford[2]
		Red Flag Act 1865*		Speed limit of 4 mph on roads imposed for steam coaches.
			Gottlieb Daimler (1834-1900) and Karl Friedrich Benz (1844-1929) independently developed the internal combustion engine in Germany in 1885.	
Local Government Act 1888*. Population of England and Wales 26 million with 60% living in urban areas. Urban social problems began to be recognised.		Local Government Act 1894 enacted*		County Councils (CC) created as toptier authorities in rural areas and County Borough Councils (CBC) created as unitary authorities in larger towns. The 1888 Act fixed the responsibility for the provision of roads to these councils. The 1894 Act formally abolished the parish system.
Comprehensive urban planning promoted in the mid-19th Century to solve urban problems. Professor Williams produced a development plan for central London.[3]	Railway and Canal Traffic Act 1894*			Railway and Canal Commission appointed to control rates and to contain the monopoly powers of railways over business interests. This form of control was atypical of that age.
		Locomotives and Highways Act 1896*		Speed limits raised to 14 mph. However weight limits restricted the development of road based public transport. Weight limits were removed in 1905.

CENTRAL & LOCAL GOVERNMENT	TRANSPORT PLANNING	ROAD PLANNING	OTHER EVENTS OF INTEREST	COMMENTS On items marked with * in a column to the left
	Municipal Councils acquired steam or horse tramways which they electrified and extended.[4]	Development and Road Improvement Funds Act 1909* Finance Act 1910*	In the States, the Ford Model T or "Tin Liz e" (1908) was introduced. This mass produced car being cheap, brought motoring within reach of the masses.	The 1909 Act constituted Road Boards with powers under the 1910 Act to make available grants to highway authorities for the provision of roads or for the Board to privide roads on its own account. The grants were financed by the imposition of motor spirit duties and licence fees.
Town Planning Act 1909*			Ebenezer Howard ( )*	Planning was established as a profession. In 1905 the planning reformers of the time founded the Garden City Association (lately Town and County Planning Association) to promote Howard's ideas. Letchworth is the first Garden City founded in 1901. The 1909 Act gave local authorities power to make comprehensive plans for the development of new suburbs on the periphery after obtaining planning permission from the Ministry.
The First World War 1914-1918	Railway Executive Committee composed of managers of existing companies operated a satisfactory unified service to support war effort*	Development of road network curtailed.	In the out-break of war, there were nearly 400,000 motor vehicles in use in Great Britain.*[5]	Railway locomotives and rolling stock were poorly maintained during the war due to loss of labour and maintenance facilities. Poor maintenance of rollong stock and high wages during the war led the railways to financial difficulties on return to peace time. Development of road vehicles accelerated resulting in serious disco-ordination between roads and vehicles.
Town Planning Act 1919 eliminated much of the central control built in the 1909 Act. The 1919 Act made town planning obligatory for towns exceeding 20,000 population. It also permitted adjacent authorities to draw joint development plans.	The Ministry of Transport was established in 1919. The Ministry paid compensation for any deterioration of railway assets during the war period and 100% increases in rates were authorised.*	The new Ministry was also responsible for organising a national road network. A special fund of £10.5 million was set aside in 1918 to assist highway authorities to undertake maintenance work postponed during the war.		Railway finances continued to deteriorate. This situation was exacerbated by the coal strike of 1921 which drastically reduced railway traffic.

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		Road Traffic Act 1920 created a Road Fund into which all licence fees and duties on petrol were paid.*	In 1920 there were nearly 800,000 vehicles in use in Great Britain (GB).	Roads were classified according to their value for through-traffic and grants were paid by the Ministry to the highway authorities from the road fund. The link between taxation of road users and expenditure on roads continued until 1926 when it was first raided by Winston Churchill for general expenditure purposes. This link was never regained.
	Railways Act 1921 reorganised the railways and created four regional companies.			Under this reorganisation, railway wages were controlled by the Central and National Wages Board. Rates and charges were controlled by Railway Rates Tribunal. This reorganisation did not help the railways financially.
			Limited entry toll roads opened in Italy by 1924.*	These are considered to be the first steps towards a motorway system in Western Europe.[6]
Local Government Act 1929		The 1929 Act created Class I, Class II and unclassified roads.*		Exchequer grants were made payable for all new construction and major improvement works by County Councils and County Borough Councils at a rate of 75% for Class I and 60% for Class II roads. County councils also attracted grants for the maintenance of classified roads.
	Road and Rail Traffic Act 1930 introduced road haulage licencing for entry into the industry.	Road Traffic Act 1930 enacted to improve road safety and to control public service vehicles and the regulation of road passenger transport.*	In 1930 there were nearly 2 million vehicles in GB.[7] This compared with a 1930 total of 26 million vehicles in the USA. First wave of urban congestion felt in the larger cities of the States.[8]	The traffic commissioners appointed under the 1930 Road Traffic Act were empowered to licence the operation of public service vehicles having regard to overall co-ordination and safety. Except for cross-subsidies allowed by the commissioners for the operation of unremunerative services, bus operations were largely considered as profit-making ventures.
Town and Country Planning Act 1932 sought to encourage joint planning by adjacent authorities in major urban regions. In the inter-war			British Road Federation (BRF) was founded in 1932. Its founder members include the Society of Motor Manufacturers and Traders and the Road	

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period, huge expansion of low density council houses for working classes took place.*			Haulage Association. BRF is a particularly successful road pressure group.[9]	The rapid expansion of low density housing caused serious problems for the provision of roads, sewerage and public transportation.
	London Passenger Transport Undertaking created in 1933 to provide co-ordinated passenger transport on efficient business and technical lines.*	Road and Rail Traffic Act 1933 introduced Types A. B and C road haulage licensing system. A Transport Advisory Council established for the Minister of Transport.	In 1934 there were 2.4 million vehicles in GB which resulted in 239,000 road vehicle casualties: a rate of one casualty for nearly ten vehicles.[10]	Municipal bus undertakings were the main providers of urban passenger transport services outside London. Birmingham, Glasgow, Liverpool and Manchester had municipal systems with over 1,000 buses, whilst there were 23 municipalities with number of buses between 200 and 1,000.
		Trunk Road Act 1936 enacted.*		This Act created 4,500 miles of the more important thoroughfares to be trunk roads for which the Ministry of Transport is the highway authority.
Decline of old manufacturing and mining industries leading to depression in the industrial cities of the north. Barlow Commission appointed in 1937 to report on ways of dealing with the problems of unemployment in the industrial towns.*	Continued decline of the railways accentuated by the depression in the heavy industries.			In 1940, the Barlow Commission recommended a number of policies including the decentralisation and dispersal of industries from large cities, the redevelopment of congested city centres, balancing of industrial development in different regions and diversification of industry within each region. Barlow Report initiated the Town and Country Planning Act 1947 and gave birth to the concept of regional planning.[12]
The Second World War 1939-1945	Government took direct control of railways which was managed on similar lines to that during the Ist World War.*	Road transport restricted to short haulage in order to preserve fuel supplies for war effort.		Deterioration of railway assets particularly rolling stock have resulted due to poor maintenance and over-working without replacements during the war

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			During the War the number of road vehicles in GB reduced to less than the 1930 total of 2 million vehicles.* In USA there was a small rise to 30.6 million vehicles.[13]	Design and Layout of Roads in Built-Up Areas was issued by the UK Ministry of War Transport. This manual prescribed the standards for roads in urban areas.[14]
The Scott Report on Rural Land Use and the Uthwatt Report on Compensation were published in 1942. The two reports stemmed from Barlow Report.*				The Scott Report argued for conservation of agricultural land from urban encroachment. The Uthwatt Committee recommended the nationalisation of development rights outside urban areas. The two reports together with the Barlow Report formed the corner-stone of the Town and Country Planning Act 1947.
The Abercrombie Greater London Plan was published in 1944.*		The Abercrombie Plan recommended a network of four rings and ten radial roads as part of the land-use plans. A number of roads on this network were to be motorways.*[15]		The production of fixed end-state long term plans began in UK during this period. These landuse plans also included plans for highway provisions.
			In the United States a number of highway master plans for urgan areas were published during the immediate post war period. The Federal Aid Highways Act 1944 was enacted in the United States.*	This Act provided for Federal-State co-operation in providing a comprehensive network of inter-state highways including urban motorways in the USA.
Post-war Labour Government elected in 1945.[15]				

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Distribution of Industry Act 1945 and New Towns Act 1946 enacted. The latter was based on Reith Report on New Towns: 1946.*		Trunk Road Act 1946 extended the mileage of trunk roads to be 8,000 miles. Class III roads were introduced in 1946. These roads attracted 50% grant from the Exchequer.		In the UK the new towns were created to accommodate the overspill populations from the conurbations. The towns were built by autonomous public development corporations, one for each town, financed directly by the Treasury and outside the existing local government structure. The towns were founded on green-field sites. The 1945 Industry Act helped to relocate industries to these new towns from the conurbations. Stevenage is the first new town, founded in 1946.
Town and Country Planning Act 1947 enacted.*				Under the 1947 Act, development control was linked with development plan making. Counties and county boroughs were to draw up plans (to be revised every five years, but this was not followed in practice) for approval by the Minister. Development control was exercised by the local planning authorities according to plans showing precise locations and supported by written Statements for each type of development. Also the 1947 Act nationalised the development rights, the effect of which was to discourage speculative development. Essentially, this Act provided for the publication of detailed end-state plans for fairly moderate growth, the pressure having been relieved by the new towns. The framework for the new town plans and the local plans were contained in regional plans.
	Transport Act 1947 enacted. Its aim was to provide some co-ordination of transport provision.*	In London a "Joint Technical Committee" of the County Councils and the Ministry of Transport was established to further develop the road proposals contained in Abercrombie's Greater Lond n Plan.[18]		The 1947 Act set up the British Transport Commission (BTC) and five separate executives for operating the railways, docks and inland waterways, road transport, London Transport and hotels owned by transport companies which were nationalised. Technical operations of the railways was entrusted through an executive to six operating regions. Long distance public haulage was nationalised except for traders transporting their own goods. Short haulage of less than 25 miles was not restricted. No radical changes were introduced in the rest of the transport field.

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				The overall direction and financial control were retained by the BTC which helped the railways since its operations were cross-subsidised from the more profit-making ventures.
		Special Roads Act 1949 enacted.*		The 1949 Act enabled the Minister to construct motorways for use by restricted classes of vehicles.
Labour Government re-elected with a majority of six seats in the 1950 elections.	1950: passenger mileage in GB was 103,000 million; 44% bus, 23% train and 28% mainly by private vehicles.	During 1950 a total of 16,706 million journeys in UK by road based public transport, 16% London Transport, 49% Local Authorities, 35% other operators. Public transport useage was at its peak at about this period.	Petrol rationing abolished in UK.*	By 1950, the number of motor vehicles in UK had doubled since the end of the II World War despite petrol rationing and curbs on the production of private cars for the home market.
			European Road (E) networks designated in September 1950.[19]	
		In 1951 the London County Council included an "Ultimate Road Plan" in their Development Plan. The road network planned was estimated to cost £90 million to be spent over 20 years.*[20]		The Ultimate Road Plan replaced Abercrombie's Road Plan which was abandoned after two years' detailed study. The study concluded that the cost of implementing Abercrombie's road plan was prohibitive. Growing complaints about traffic congestion, production of ambitious plans and modification of plans to meet social and economic objectives after only low implementation has been the constant pattern of transport planning in London, since the First World War.
Conservative Party was elected to Government in 1951.				

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Population of England and Wales in 1951 was 43.7 million with the highest percentage, 80.8% living in urban areas.[21]				
Town Development Act 1952 introduced by Labour and enacted by Conservative government.*		R J Smeed estimated that road vehicles will double over the next 30-40 years. In fact this happened in 8 years.		The 1952 Act provided for the expansion of small and medium sized towns through co-operation between exporting (over-spill) authorities and receiving authorities with Government aid for public services. However the Conservative Government reversed the application of the 1947 Planning Act. in particular the attempt of the Act to by-pass the private market. The private developer was brought back and freed of restrictions to make speculative gains. The rate of growth of new and expanding towns was curtailed. These two actions combined with the population explosion which began soon afterwards resulted in an unprecedented growth of SUB-URBAN development, essentially residential.
	Transport Act 1953 enacted in UK.*		In the USA, work began on the Detroit Transportation Study; the first major urban transport study.	In the UK the 1953 Act denationalised the road haulage industry but BTC was allowed to retain a part of the assets, (British Road Services) which they had difficulty in selling. It is interesting to note that BRS operated in competition with private companies and continued to be profitable. The Railways financial position deteriorated with reduced cross-subsidies.
			In 1954 in the States Mitchell and Rapkin published "Urban Traffic: A Function of Land-Use."*[23]	This is recognised to be the first publication to demonstrate the close functional relationshop between urban traffic, landuse and populations.

CENTRAL & LOCAL GOVERNMENT	TRANSPORT PLANNING	ROAD PLANNING	OTHER EVENTS OF INTEREST	COMMENTS On items marked with * in a column to the left
Conservative party retained in the Government after elections in 1955.	1955: passenger mileage in GB was 128,000 million; 39% bus, 19% train, 42% rest.	In the UK the Road Campaign Council was formed in 1955.[24] During 1955 a total of 15,929 million journeys in UK made by road based public transport.	In 1955 there were 6.4 million vehicles in GB. This represents a growth of 10% per annum compound in the post-war period.* This compares with a total of 62 million in the States. The growth in the USA is 7% compound in the post-war period.	In GB road vehicles completed 47.8 thousand million vehicle miles during 1955 which represents 7.5 thousand miles per vehicle per annum. There were 268.000 road vehicle casualties during 1955; a rate of one casualty per 24 vehicles or 5.61 casualties per million vehicle mile travelled. In 1934, casualty rate was one per 10 vehicles per annum. During 1955, the expenditure on roads in GB was £123 million of which £14 million (11%) was spent on major improvement and new construction. In the USA the expenditure on the maintenance and construction of federal-state highways was $8 billion during 1955.
		Designs for the first wave of inter-urban motorways were in an advanced stage of preparation.[25]	In the USA Federal Aid Highway Act: 1956 was enacted.*	In the USA, this Act provided 90% Federal Government grant for the construction of a national system of inter-state and defence highways, with special emphasis to urban highways. This activity was funded by a Highway Trust Fund, fed by federal gasoline taxes.[26]
		The roads lobby began its campaign "Urban Motorways Conference".	The importance of comprehensive land use transport planning began to be recognised in USA around 1956.*	In the States, from the beginning, transportation planning was dominated by State Highway Department engineers backed by the Bureau of Public Roads (BPR). This is the prime reason why most transport study recommendations deteriorated into master highway plans. This pattern is not very different from the history of transport planning as it was to heppen in the UK.
Civic Trust was founded in 1957 to campaign for the protection and improvement of built environment.*	Transport (Railway Finances) Act 1957 enacted. This Act legalised the system of deficit finance to the railways.			In the 1960s the Civic Trust supported the provision of ring roads to remove through traffic from urban areas.[27]

CENTRAL & LOCAL GOVERNMENT	TRANSPORT PLANNING	ROAD PLANNING	OTHER EVENTS OF INTEREST	COMMENTS On items marked with * in a column to the left
		Preston Bypass, the first length of motorway in GB open to traffic in December 1958.[28] Conurbation Highway Committees consisting of engineers from the Ministry of Transport and local authorities formed in 1959 to advise on the long-term highway needs of major urban areas.[29]	In the USA the Congress authorised $ 5 million in matching grants to the States for urban and mass transport planning. This grant was paid against the recommendations of the Bureau of Public Roads (BPR) who contended that the inter-state highway programme would relieve city centre congestion.*	In the USA, by late 1950s, the city representatives began to recognise that congestion in the cities could not be solved by the sole provision of urban highways. By this time, in many of the larger cities of the States, as much as two thirds of the total city centre land was already dedicated to streets and car parks. Urban public transport ridership has declined by half in the post war period. The BPR's attitude was similar to the UK's Department of Transport. The BPR encouraged the city authorities to provide urban motorways to relieve congestion. They did not relinquish this stance until the early 60s.[30]
Conservative Party re-elected to the Government in the 1959 elections.	1960: passenger mileage in GB was 159,000 million, 28% bus, 16% train, 56% rest.	The London County Council revised the development plan in 1960. The road plan was barely implemented. However it was decided to have a further look of the road plan and London Traffic Survey was set up.*		London Traffic Survey, the first of its kind in UK began in 1961. Phase I of the report which is a collection of statistics was published in 1964 and Phase II which is a forecast of travel patterns for 1971 and 1981 was published in 1966.[31, 32]
	Road Traffic Act 1960 enacted.	During 1960 a total of 13,680 million journeys in UK made by road based public transport; 17% london transport, 44% local authorities, 39% other operators.		
	Jack Committee Report published in 1961.*	London Traffic Management Unit set up in 1961.[33]		This report on "Rural Bus Services" recommended support for unremunerative services administered by the county councils.

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		The road capital in the UK was being directed on the 1000-mile inter-urban motorway programme planned for completion by the early 1970s.	The Housing Act of 1961: Urban Mass Transport Provisions enacted by the US Federal Government. This Act was promoted by the representatives from the larger cities faced with increasing traffic congestion despite heavy investment on urban motorways.*	This Act included – (a) $50 million revolving loan fund to finance urban mass-transportation capital; (b) $25 million in matching grants for demonstration projects to show the feasibility of new transportation methods and systems and (c) $75 million in matching grants for area or regional planning of mass transportation. This low level of assistance represents the opposition to the Bill faced in the Senate during its passage. The intention of the congress was to provide a short-term crash programme to begin a limited attack on selected urban transport problems. This level of expenditure compares with $5 billion capital and more than $6 billion on the maintenance of federal-state highways in the USA.[34]
			The Federal Aid Highway Act 1962 enacted in the United States.	The 1962 Act specified that future highways in urban areas must conform to a plan for comprehensive development for the entire region.
	Transport Act 1962 enacted in UK.*			The British Transport Commission (BTC) was abolished and replaced by five new public authorities; the British Railways Board, the London Transport Board, the British Docks Board, the British Waterways Board and the Transport Holding Company. All of the BTC's activities left after division among the first four bodies were entrusted with the last body (THC) which in particular acquired road haulage and bus and coach service interests. The Railways accumulated debt was written off and their annual interest payments were henceforward to be met by the Exchequer. The railways were given greater freedom in commercial matters. The Nationalised Transport Advisory Council was set up to advise the Minister on the co-ordination and other aspects of nationalised transport undertakings.

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By 1962 the population of England and Wales was nearly 47 million with 80% living in urban areas.		South-East Lancashire North-East Cheshire (SELNEC) Highway Plan was published in 1962. This is the first of the Conurbation Highway Committee reports to be published. This is a highway master plan for the SELNEC area.[35]	The total vehicle ownership in England and Wales was 10.5 million in 1963. This represents a growth rate of 10.5% compound per annum in the post-war period or nearly a six-fold increase.* This compares with 85 million vehicles during 1962 in the USA.	The sub-urban growth spurred by the relaxation of priviate development in 1951 together with increased car ownership has led to traffic congestion, in urban areas particularly along the radials leading into the urban centres. This pattern of sub-urban growth and congestion along the radials is similar to that happened in the USA and which led to the highway master plans in that country, soon after the II World War.
The return of the private developer as the main agent for housing development (combined with the population explosion during the past decade) meant that the limited provisions made in the static end-state plans was insufficient to meet the growing housing needs. Search for a more flexible system of planning resulted during 1963 to 1965 in the publication of a series of regional studies which formed the framework for the latter day structure plans.	Traffic in Towns (Crowther and Buchanan Reports) published in 1963.*[36]	Hall Report published during 1963.		Traffic in Towns contains two reports dealing with the long term problems of traffic in urban areas. The Steering Group's (Chairman: Sir Geoffrey Crowther) Report is an assessment of the main report produced by the Working Group under the Chairmanship of Colin Buchanan. Buchanan Report accepted the demand for urban motoring as inevitable and recommended means of accommodating the car in urban areas. This involved substantial changes to the town's fabric to provide a comprehensive network of roads including motorways which will help to canalise vehicles movements and create environmental areas within which civilised urban life can be developed. Thus began a decade of urban landuse-transportation planning in the UK. The Steering Group unreservedly supported the Buchanan proposals. At that time a number of experts believed that Buchanan proposals were fairly limited in their ability to meet the needs of the car in urban areas.[38]

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Planning Advisory Group (PAG) appointed in 1963 by the Minister of Housing and Local Government to look into the question of preparing development plans within the framework of regional plans.	Beeching Report published in 1963.*[39]			The Beeching Report proposed the withdrawal of unremunerative passenger and freight services mostly in rural areas, and concentration of railways effort on the transport of larger bulk and heavier density goods on trunk rail routes. The plan was partly implemented under the Conservatives when it was abandoned by a returning Labour Government.
Labour party was elected to the Government in 1964.	Circular 1/64; entitled "Buchanan Report: Traffic in Towns" issued.*[40]			This Circular recommended the Buchanan Report and requested local authorities in the larger towns to produce comprehensive landuse-transportation studies to be financed equally by the Government and the Local Authorities.
The Planning Advisory Group's (PAG) Report published in 1964. It recommended that in urban areas the detailed development plans should be replaced by a new form of urban plan (urban structure plans) which would set out largely in written form, the main structural elements of the town, the broad disposition of land uses and the associated primary route network.[41]		An important function of the new type of urban plan is to identify "action areas" for comprehensive development including the easing of route location for urban motorways which would be identified as a result of the Buchanan-style landuse-transportation plans.*[42]		Buchanan recommendations were further supported by – (i) a rapid expansion of budget by the Government for urban road construction from £55 millions in 1964/65 to £135 million in 1969/70 (in 1964 values); (ii) the appointment of a Committee to look into the various possibilities of partially restraining non-essential traffic; (iii) the encouragement of local authorities to consider comprehensive plans and policies for traffic-management, public transport and car-parking.[43] A report on "Road Pricing: The Economic and Technical Possibilities" (The Smeed Report) published in 1964.[44] However its recommendations were not implemented. Significant advances were made in traffic management techniques since the beginning of this year.
The Greater London Council (GLC) and the London Borough Councils were created under the London Government Act 1963. They took on their strategic functions on 1st April 1965.*[45] (continued)		During 1965 a total of 11650million journeys in UK made by road based public transport – 18% by London Transport, 42% by Local Authorities, 40% other operators.		The Greater London (population nearly 7.1 million) Council and the 32 London Boroughs replaced the London and Middlesex County Councils, the county boroughs of Croydon, East Ham and West Ham and 82 other lower tier authorities. In addition to being a landuse and transport planning authority, GLC is the regional parks authority and has responsibilities for land drainage, refuse disposal, fire service, (continued)

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The GLC is the strategic planning authority, has broad policy and financial control over the London Transport Executive, is the highway authority for metropolitan roads and is empowered to control traffic and parking. The London Borough Councils (LBCs) are the local planning authorities and are responsible for the provision of local roads and car parking.*46				entertainment licensing and has limited powers to provide housing. The LBCs are additionally responsible for education (except within inner London), housing, libraries museums and art galleries, social services, refuse collection and street cleansing, environmental health, and other local services.
	1965: passenger mileage in GB was 207,000 million, 19% bus, 11% train, 70% rest.	In GB £423 million was spent during 1965 on the provision and maintenance of roads. Of this sum £192 million was spent on major improvement and new construction.*48	The manual "Urban Traffic Engineering Techniques" was published in 1965.49 Computer-aid area traffic control was introduced in UK (West London and Glasgow at about the same time).50	1965: Motor vehicles in GB = 12.9 million = 0.24 per person, i.e. 7.3% p.a. growth since 1955. Mileage = 101,000 million. Casualties = 398,000 = 1 per 32 vehicles = 3.94 per million vehicle miles. (A fall since 1955 of 28%.) In the USA there were 94 million vehicles which represent a growth of 4.3% per annum compound over the decade.52
	Trades Union Congress published their "Transport Policy" in 1965. This called for the co-ordination of road and rail freight transport under the aegis of a British Transport Commission.*53	Despite a high level of inter-urban road expenditure, the Ministry forecasted growth in overloading of the arteries. Therefore they set about preparing another plan to further improve the inter-urban road system in the decade from 1970.54		In the field of passenger transport, the TUC Report called for public transport subsidies and private traffic restraint. This document formed the basis for the 1968 Transport Act. This is a clear example of the effectiveness of national pressure groups in Government policy making. It was about this time, the planners recognised the potential of parking control as a means of traffic restraint. Prior to this, private developers were encouraged to provide integral car parking provisions even in urban areas.55

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Labour Party retained in Government with an increased majority after the 1966 elections. Royal Commission on Local Government in England was appointed in 1966. The Report of this body led to Local Government Reorganisation on 1st April 1974.	White Paper on National Transport Policy published in 1966. It reiterated comprehensive planning and public subsidy for urban transport called for by the TUC. This White Paper formed the basis of the Transport Act 1968. It is interesting to note that in this White Paper the Government referred with approval about providing the road network recommended by Buchanan.[57]	Local Government Act 1968 replaced a number of specific grants including most of the highway grants by the Rate Support Grant (RSG).*[57] The 1968 Act also introduced specific grants for comprehensive redevelopment works thus enabling urban motorways to be constructed as part of redevelopment.[58] Road Traffic (Regulations) Act 1967 enacted.	In 1966, typical cost of a dual 2-lane rural motorway was £0.8 million, in sub-urban areas (2 to 7 miles from the centre) £1.0 to £3.0 million, in non-central urban areas £3.0 to £5.0 million and in the central business district £13.0 million.[59]	Transport Circular 9/66 defines principal roads (which were nearly all Class I roads at that time). Under the 1966 Act maintenance and minor improvement of all but Class I roads and the maintenance of principal roads were included in the RSG calculations. However, principal road construction was eligible for direct grant assistance at a rate of 75% of the cost. This in effect encouraged the local authorities to provide more principal roads including urban motorways. Direct grant aid for principal roads was not removed until the introduction of Transport Supplementary Grant (TSG) in 1975.
	White Papers on (1) Freight Transport (2) Railway policy and (3) Public Transport and traffic were published in 1967.[60,61,62] The basis of the Transport Act 1968 are explained in this and the 1966 White Paper entitled "National Transport Policy".	Road Construction Units (RCUs) established in 1967/68. RCUs staffed mostly by specialists seconded from the County Councils were made responsible for the design and supervision of construction of motorway and trunk road contracts valued in excess of £1 million each.[63]	In 1967 the Road Research Laboratory estimated that during 1975, motor vehicle kilometres travelled in GB would be 267 thousand million and in 1980 would be 318 thousand million.[64] The out-turn was 244 and 285 thousand million vehicle kilometres respectively. During 1967, vehicle kilometres travelled was 174 thousand million.	In the urban front the Minister was encouraging the early submission of the motorway proposals. For instance, in 1967 the Minister stated that "the schemes in the (urban principal road) preparation list will be included in the programme in time for a start within a period of five to eight years (at the outside) from 1971 ... Much earlier starts will be possible for schemes fully prepared more quickly." - ROADS IN ENGLAND.

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		Better use of Town Roads was published in 1967.* 65		The urban motorways were considered as part of a long-term strategy to tackle the traffic problem. In the short term "Better Use of Town Roads" recommended that parking control was the most promising form of restraint. Road pricing was recommended for the long term.
		Traffic and Transport Plans: Roads Circular No 1/68 was issued in 1968.*66	In 1968 there were nearly 14.4 million vehicles in GB. Transport and Road Research Laboratory estimated that vehicle ownership would be 20.4 million in 1975 and 24.6 million in 1980. The out turn was 17.5 million in 1975 and 19.2 million vehicles in 1980.	Circular 1/68 paved the way to implement traffic and parking regulations. Steps were to be taken in Transport Act 1968 to increase the powers of LAs and extend grant aid for comprehensive traffic management schemes. The Minister asked all urban authorities with populations over 50,000 to prepare Traffic and Transport Plans, showing how they intend to relate their traffic and parking policies to their available road capacities and to their immediate and longer term policy objectives. The plans are to cover a period up to the mid-1970s.
Town and Country Planning Act 1968 enacted. This Act based on the PAG Report and further explained in the White Paper entitled "Town and Country Planning", brought about wholesale revision of the de.·lopment planning system.67 In particular it replaced the old style development plan system introduced under the 1947 Act and consolidated under the Town and Country Planning Act 1962.68 The 1968 Act introduced the new style structure and local plans. The Structure Plan (continued)	Transport Act 1968 enacted.*			This Act – 1. redefined the Beeching's RAILWAY network (see page 2.15) to take into consideration the country's commercial and social needs: the Government undertook to assume responsibility for losses incurred on services retained for social reasons. 2. Replaced the Transport Holding Company (see page 2.13) with the National Freight Corporation to provide integrated road and rail FREIGHT services and established a Freight Integration Council to advise the Minister. 3. Reorganised the road haulage LICENSING system to require an operator's license for all goods vehicles exceeding 1.5 tons and a transport manager's license. 4. Created the National Bus Company (NBC) and the Scottish Transport Board to provide co-ordinated PASSENGER transport in association with other operators including the British Railways Board.70 (continued)

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(SP) is essentially of written format supported by diagrams and a key map of the area explaining the local strategic planning policy.[69]				5. IN THE CONURBATIONS, the 1968 Act; (a) created the Passenger Transport Authorities and the Passenger Transport Executives to operate co-ordinated local passenger transport in place of the former largely municipally operated services.[71,72]
The detailed applications of the SP are covered in the Local Plans (LP).	Transport Act 1968* (continued)	London Motorway Action Group was formed in 1968.		(b) introduced financial reforms aimed to eliminate the bias against public transport or revenue expenditures in favour of private transport or capital expenditures. (c) gave added powers to the local authorities to include traffic management measures as part of a comprehensive transport policy.
Greater London Development Plan (GLDP), a structure plan for the Greater London area published in March 1969.[73] This is one of a few structure plans published by selected first-wave authorities. Development Plans: A Manual of Form and Content was published based on the experience to assist subsequent authorities preparing structure plans.[74]		GLDP estimated that twice as many families will own cars in 1981 as in 1966.*	During 1964 a total of 9823 million journeys in UK made by road based public transport 18% by London Transport, 41% by local authorities, 41% by other operators.	In order to provide for this car-ownership, the Development Plan proposed a road network which included 3 ring ways, the Outer Orbital Road (M25) and 12 radial motorways.[75]
Maud Report was published in 1969.[76] This led to a White Paper in 1971 and to Local Government Reorganisation in England on 1st April 1974.[77,78]		A Committee was appointed by the Minister of Transport to look into the environmental and social problems of locating new roads in urban areas.		

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The Wheatley Report also published in 1969 led to the Scottish Reorganisation in 1975.[79] Skeffington Report on "People and Planning" was published in 1969.*[80]				The Skeffington Report dealt with the best methods of securing publicity and public participation in preparing structure and local plans. The report recommended extensive participation and consultation in order to seek maximum public acceptance of the draft plan. This was however found to be impracticable due to limitations in time (see details given in Ministry of Housing and Local Government Circular 52/74).
	During 1969 Passenger Transport Authorities (PTA) were formed in the Midlands, the Merseyside and the South East Lancashire/North East Cheshire (SELNEC) conurbations.*[82] 1970: passenger mileage in GB was 248,000 million, 14% bus, 9% train, 77% rest.	In GB £805 million was spent during 1970 on the provision and maintenance of roads. Of this sum £504 million was spent on major improvement and new construction.	In the USA the number of motor vehicles reached 100 million in 1970. This represents a growth rate of 1.3 per cent per annum compound over a 5-year period.	In terms of the reorganised bus-industry out of a total of 9823 million journeys in UK, 1786 million was provided by London Transport 4037 by PTAs and municipal operators and 4000 million by NBC, Scottish Transport Board and others (compare with Item on page 2.12 1970: Motor vehicles in GB = 15.0 million = 0.28 per person. i.e. 3% p.a. growth since 1965. Mileage = 128,000 million casualties = 363.000 = 1 per 41 vehicles = 2.84 per million vehicle miles. (A fall since 1965 of 28%.)
Greater London Development Plan Public Inquiry began in the Autumn of 1970 and (continued)		The most controversial aspect of the GLDP was the cost of road proposals which the GLC (continued)	Friends of the Earth (FOE) founded a branch in UK in 1970. FOE is an internation- (continued)	This Inquiry is almost certainly the largest statutory inquiry ever held in this country. It lasted for 237 days during which time 28,207 objections were considered. Subsequent to this experience (continued)

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continued to the Spring of 1972.[83] The Inquiry was chaired by Frank Layfield,QC.		estimated to be £860 million while the objectors led by the London Amenity and Transport Association claimed to be in excess of £2,000 million.[84] There was also disagreement in almost all the other aspects of the transport study including the number of dwellings lost and level of traffic after the motorways.[85]	ally active environmental group which campaings for greater use of public transport in order to efficiently use energy and other natural resources.[86]	steps were taken by the Government to restrict the rights of objectors at structure plan public inquiries to limited groups of people selected by the Secretary of State for the Environment.
			Report of the Committee on Highway Maintenance issued in 1970.*	This report (Chairman, A H Marshall) deals with the planning, execution and financial control of highway maintenance work. Its recommendations include maintenance standards, a uniform costing system for roads and measures to improve productivity. Present-day computer aided maintenance rating systems (computer programs CHART and MARCH) are based on his recommendations.
	Exclusive bus ways open in Runcorn New Town.[87]	The Government backed 11 bus-demonstration projects at a cost of £150,000.*[88] (For details see reference 116)		Public transport capital projects become fashionable. A number of innovative public transport capital projects were discussed. However no significant advances resulted in the urban transport field.[89]
Conservative Party elected to Government in 1970. Department of the Environment was formed by the amalgamation of the Ministry of Transport and Ministry of Housing and Local Government.[90]	PTA formed in the Tyneside.[91] Construction of Liverpool's Underground Loop Line began in 1970.	"ROADS FOR THE FUTURE: THE NEW INTER-URBAN PLAN FOR ENGLAND", published. The Plan based on the Labour Government's Green Paper of March 1969 outlines the plans for £4,000 million (1970 prices) worth of trunk roads to be completed in the next 15-20 years in England.*[92]	London Transport's Country Buses and Green Line services transferred to the National Bus Company (NBC).[93]	In urban areas the Inter-Urban Plan recognised that the problems are complex. The Government's intention was that as suitable schemes are brought forward by the local authorities, progressively change the balance and priorities of expenditure within the total road programme between inter-urban and urban investment. Now rather less than 40% of the total programme is spent on urban roads. The Government envisages that this proportion will need to rise to well over half the total by the 80s.[94] Plans for Scotland and Wales were published in 1969.[95,96]

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		Western Avenue Extension and West Cross Route, the first instalment to the London motorway network was opened in 1970.*[97]		Two men who took part in a demonstration against the motorways were imposed token fines of £1 each. The Magistrate said, "Everyone must have sympathy with your situation, which is intolerable". The Government is generally under pressure to improve compensation for those whose environment is affected by urban road building.
The White Paper "Local Government in England: Government Proposals for Reorganisation" and the consultative document, "The Reform of Local Government in Wales" were published in 1971.[98,99]		The target 1,000 miles motorways in UK was completed in late 1971.*		The Minister of Transport planned to complete a further instalment from the Inter-Urban Plan in order to provide a network of about 3,500 miles of high standard strategic trunk routes of which about 2,000 miles will be motorways.
The Town and Country Planning Act 1971 enacted.*				The 1971 Act has substantially repealed and re-enacted in a consolidated form the provisions of the Town and Country Planning Acts 1962 to 1968.[100]
Tribunals and Inquiries Act 1971 enacted.				Current regulations covering tribunals and inquiries are covered by this Act.[101]
		Highways Act 1971 enacted. During this time, there were over £1400 million worth of principal road schemes, majority in urban areas, under preparation. A number of measures were included in the 1971 Act in order to		The 1971 Act included the following measures.[103] 1. It reduced the period allowed for public objections from 3 months to 6 weeks; 2. Objectors are now liable to have their objection disregarded if they did not include with it a statement of the grounds of objection;

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		achieve faster rate of completion of these roads.[103]		3. Objectors who wish to suggest an alternative route at the inquiry were liable to identify it within 14 days; 4. It gave powers to the Secretary of State to confirm scheme orders for one part of a scheme while the other is under consideration, and 5. It made provisions for acquisition of land in advance of immediate requirements.[103]
Local Government Act 1972 enacted. This Act reorganised local government in England and Wales with effect from 1st April 1974. County boroughs were abolished and a three-tier system of local government was established (this excludes Greater London where reorganisation was completed in 1965).*[104]	An anomaly with respect to transport planning is that as stated in the comments opposite, under section 203 of the 1972 Act, the shire Counties are expected to co-ordinate public passenger transport. Also as local education authorities, they form an important sector of demand for bus services (public and contract). However, municipal buses in these areas are operated by district councils.	Two anomalies are worth noting in the provision of roads – 1. Trunk roads provide the back-bone to the provision of a comphrensive local road network. However these roads need not conform to the approved development plans and the Secretary of State is responsible for their provision. 2. Although the county councils are the principal transportation authorities off-street parking for cars is shared by the district and parish (town) councils.	Forthcoming Local Government Reorganisation (1975 for Scotland) was said tobe a reason for abandoning a £104 million landuse and transport-ation plan for Edinburgh. By 1972, the work on the report has already proceeded for 3½ years at a cost in excess of £0.5 million.[105]	The top-tier consists of 53 county councils (including 6 metropolitan counties: Greater Manchester, Merseyside, South Yorkshire, Tyne and Wear, West Midlands and West Yorkshire), on the second tier are 369 district councils (those within the metropolitan counties are metropolitan districts) and on the lower tier are the parish councils (sometimes called the town councils) or in Wales the community councils. The principal functions of the county councils are STRATEGIC PLANNING, TRAFFIC, TRANSPORT AND PROVISION OF HIGHWAYS, national park and countryside functions, caravan sites, housing (reserve powers), administration of parts of Foods Drugs Act 1955, police, fire and refuse disposal. In addition the metropolitan county councils were made the PASSENGER TRANSPORT AUTHORITIES for their area while the non-metropolitan county councils have the following additional functions: CO-ORDINATION OF PASSENGER TRANSPORT, education, social services, weights and measures, public libraries, museums and art galleries. The principal functions of the district councils are as follows: PLANNING AND DEVELOPMENT CONTROL, PROVISION OF OFF-STREET CAR PARKS, air ports, baths and pools, museums and art galleries, cemeteries and crematoria, administration of parts of Foods and Drugs Act 1955, markets and fairs, parks and open spaces, housing and refuse collection. In addition metropolitan

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				district councils provide library services, education and social services while non-metropolitan districts may operate PUBLIC TRANSPORT UNDERTAKINGS. Parish councils amongst other things can operate OFF-STREET CAR PARKS.
Town and Country Planning (Amendment) Act 1972 enacted.*[106,107]		The cost benefit analysis computer program COBA was introduced for the assessment of inter-urban roads between £1 and £10 million, in 1973. This program calculates the net-present value of the balance of costs and benefits forecast and discounted over a 30-year period.[108]		This Act amongst other things provides for – (i) the preparation of JOINT structure plans and (ii) the introduction of the concept of the "EXAMINATION IN PUBLIC" (EIP) in place of the conventional public inquiry for structure plans. This was necessitated by the experience gained in the Greater London Development Plan public inquiry which began in the Autumn of 1970 and continued to the Spring of 1972. An EIP will be more informal and apart from this, its main feature will be that the Secretary of State selects both the issues and the participants and the objectors have no legal right to be heard.
Circular 52/72 was issued by the Department of the Environment.[110] This Circular gave lukewarm support to the recommendations of the Skeffington Report which was published 3 years earlier. For instance the Circular stated that "... participation has to work along with what are already complex procedures. There is a risk that by adding to these complexities, the implementation of the new development plan system will (continued)		"New Roads in Towns": Report of the Urban Motorways Committee was published in July 1972.[111] This report formed the basis for the Government's White Paper "Development and Compensation – Putting People First" and then to the Land Compensation Act 1973.[112]	Nottingham City Council introduced extensive traffic restraint and bus-priority measures culminating in the famous "Zone and Collar" experiment in 1975.[113] This experiment was abandoned in 1976.*[114]	The central feature of the traffic restraint system in Nottingham (abandoned 1976) is the "Zone and Collar" system of control.[113] The zones consist of environmental areas (5,000 to 25,000 population) bounded by main roads, the vehicle exits from which are controlled. From a typical zone half the exits are physically blocked, some of the remainder will be reserved at least during the peak for buses only and all the remainder will be controlled by traffic signals. The signals at the zone exits will control the rate at which vehicles leave the zone depending on the state of loading of the main road. Traffic entering zones will be unrestricted. The zone control was supplemented by a collar control cordon which controlled the amount of traffic entering the five kilometre diameter inner-city area so as to ensure that traffic already on the main road system does not overload this inner-area. The collar control consisted of traffic signals on the main roads. The near-side lane approaching the signals was reserved for buses, emergency vehicles and other (continued)

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be spread out over an unreasonable length of time. But participation in depth does not need to be unlimited in time. The overall time taken on plans is important."				commercial vehicles. The off-side lane was used by all other vehicles, which if necessary, would be delayed by the signals. The zone and collar control was supplemented by other measures to attract car users. These were park and ride facilities, free shoppers bus and flat fares.
	Second report from the Expenditure Committee on URBAN TRANSPORT PLANNING was published in 1973.*			This Report recommended that: National policy should be directed towards promoting public transport and discouraging the use of cars. The following means were recommended to promote public transport. For the larger cities, rapid transit systems should be investigated while priority measures and operating grants should be provided for bus operation. The private car should be restricted by regulating off and on-street parking within urban areas and by tougher enforcement of these regulations. All trunk and principal road schemes of urban road building which have not reached the exchange of contract stage should be re-examined ab-initio. The urban roads programme should be abolished and replaced by an urban transport programme linked to the comprehensive plans (TRANSPORT POLICIES AND PROGRAMMES-TPP: See Item on page 2.26.) required in the context of the new grant proposals. (TRANSPORT SUPPLEMENTARY GRANT-TSG). The Department of the Environment should scrutinize in detail the transport plans proposed by local authorities. Further research should be undertaken to extend the scope of transportation studies and to make it intelligible.

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Greater London Development Plan was approved in 1973.*[115]	A number of reports on "Bus Demonstration Projects" were published in 1973.[116]			The work on this plan began in 1968 and the plan itself was published in 1969.
	Construction of Tyneside Metro began in 1973.	Land Compensation Act 1973 enacted.* This Act is explained more clearly in the DoE Circular 73/73.[117]	Greater Glasgow Passenger Transport Authority was created in 1973.	Land Compensation Act 1973 provides for improved compensation to public affected by highway works. It also enables highway authorities to purchase land and carry out works to fit the road better into their surroundings and to mitigate adverse environmental effects. It provides for earlier acquisition of blighted properties. Where no land is taken, compensation is payable for depreciation caused by noise, dirt and artificial lighting. The Noise Insulation Regulations 1973, made under the Act enables residential properties to be insulated against traffic or road construction noise. The last two provisions apply to roads opened since October 1969.
	Transport 2000 was formed in 1973.*[118]	British Road Federation (BRF) formed local action groups to press for urban motorways.[119]		This is a pro-public transport (particularly railways) lobby which has been fairly successful in recent years.
		Heavy Commercial Vehicles (Controls and Regulations) Act 1973 (Dykes Act) enacted.	Protection of the Environment Bill: 1973 enacted.	
	DoE Circular 104/73 issued. This Circular introduced Transport Policies and Programmes (TPP) and Transport Supplementary Grants (TSG) as the basis for Government's grant allocations to support local transport. The TSG system (continued)	Fuel Crisis. 50 mph speed limit was imposed on 8th December 1973.		Under the TPP-TSG system, specific grants payable by the Government to local authorities were replaced by a unified system covering current as well as capital expenditure and public transport as well as roads. In the new system part of the grant will be included within the rate support grant while the balance (TSG) will be distributed among the local authorities whose expenditure as ACCEPTED by the Government exceeds a prescribed THRESHOLD. The grant payable is a percentage of the difference between the accepted expenditure and the threshold. To justify their

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came into effect from the financial year 1975/76 and directly affects county councils only.*[121] Labour Party elected to minority Government in February 1974.				applications for grant county councils have to submit annually a TPP to the Department of the Environment. The TPP cover the authorities transport objectives over a period of ten to fifteen years and provide a three year detailed programme (used to be five years) to be rolled forward annually. Loan sanctions for capital projects are also based on the TPP.
Local Government Reorganisation. The new authorities assumed power on 1st April 1974. Corporate management was adopted by the new authorities with the officers led by a chief executive (for details of reorganisation see Item)	Local Government Act 1974 enacted. This Act introduced the Transport Supplementary Grant with effect from 1st April 1975 (See Item)		In 1974, the Transport and Road Research Laboratory estimated that during 1980 the motor-vehicle-kilometres travelled in GB would be in the range 284-329 thousand million.[122] The out-turn was 285 thousand-million-vehicle-kilometres.	
Town and Country Amenities Act 1974 enacted.*	The Railways Act 1974 enacted. This brought the operation of British Rail into line with membership of European Economic Community (EEC).		National Motorways Action Committee was set up. Its immediate aim was to resist the construction of trunk roads, particularly M16 (at present M25).[123]	This Act rewrote several sections of the Town and Country Planning Act so as to make better provision and enhancement of conservation areas, and of buildings of architectural or historic interest together with their surroundings and landscapes.
Circular 98/74 issued by the Department of the Environment (DoE). This Circular expressed concern on the rate of progress made by local authorities towards submitting their plans to the Department*				The DoE reduced the scope and content of structure plans as set out in the Development Plans manual and fixed a target date of April 1978 for the submission of plans. It normally takes two years or more for a structure plan to be approved after submission.

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Local Government Reorganisation in Scotland: 1st April 1975	Provision of transport in Scotland is based on four regions with the responsibility resting on the regional authorities.* 123			The single-tier regional responsibility for transport in Scotland has proved to be more satisfactory than the sharing of responsibilities between county and district councils as operated in England.
Community Land Act 1975 enacted.*		A revised set of road traffic predictions were issued in early 1975. Uncertainties in these predictions were more positively recognised by providing three sets of forecasts, a lower and upper level of economic growth and a middle forecast.[124]		The aims of the Community Land Act were (i) to enable the community to control the development of the land in accordance with its needs and priorities, and (ii) to restore to the community the increase in value of land arising from its efforts.
	1975: passenger mileage in GB was 279,000 million, 12% bus, 8% train, 80% rest.	In GB £1527 million was spent during 1975 on the provision and maintenance of roads. Of this sum, £800 million was spent on major improvement and new construction.		1975: Motor vehicles in GB = 17.5 million = 0.32 per person, i.e. 3% p.a. growth since 1970. Mileage = 153,000 million. Casualties = 325,000 = 1 per 54 vehicles = 2.12 per million vehicle-miles. (A fall since 1970 of 22%.)
		Report on route location with regard to Environmental Issues (Jefferson Report) was published in 1976.* 126		This report recommended that initially the Department of the Environment should adopt at Preliminary Report stage a "standard environmental schedule" or "package" approach to the evaluation of environmental factors in locating roads. Where appropriate the procedures should include numerical subjective methods. In the mean time, further work should be carried out on developing monetary evaluation techniques for the assessment of environmental values.

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The positions of aldermen were abolished in the Greater London Council during 1977. These positions were abolished in the provinces after the Local Government Reorganisation.	A White Paper (Cmnd 6836) on Transport Policy published in June 1977.*	Report of the Advisory Committee on Trunk Road Assessment was published in January 1978. The recommendation of this Committee led to extensive changes to transport planning methodology in the United Kingdom. The Committee was headed by Sir George Leitch.*[125]		In the UK, White Papers are used to explain and justify major changes in Government policy.[127] In this instance the Government explained its transport philosophy as – (i) providing more support for buses and less for road construction; (ii) devolving to local councils more responsibility for planning transport and (iii) providing for a more systematic and open involvement of people, Parliament, transport operators and unions in the continuing debate on transport and the formulation of policy.[128] Main points from the Leitch Report's recommendations are – (i) D Tp should use causal analysis instead of extrapolatory methods to forecast traffic. It should indicate ranges of uncertainty and never "defend a single figure as if it were uniquely correct." Traffic counts should be taken in April/October, not August. (ii) More before and after studies should be carried out. (iii) A framework is recommended for assessing road schemes including their effect on five "incidence groups" of people. Its assessments should be made publicly available and be fully explained. (iv) Pedestrians' interests should be included within the non-economic part of the framework assessment. (v) Presentation of the options to the public should be improved by the use of noise-contour maps and film simulation of the effects of new roads when passing through particularly sensitive areas. (vi) Detailed changes are suggested to the COBA programme but it would remain as the economic component of the framework. (vii) Where possible alternatives are available, competing road and rail solutions should be compared. (viii) Urban trunk-road proposals should be evaluated more thoroughly.

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	Transport Act 1978 enacted. This Act is based on the philosophy enunciated in the 1977 White Paper on Transport Policy.*			Section 1 of the Transport Act 1978 imposes on the councils of non-metropolitan counties a duty to promote the provision of co-ordinated and efficient system of passenger transport in their areas.[130, 131] The councils are required to publish their intentions in a "five-year rolling plan" revised annually. District councils with bus undertakings are required to operate them in accordance with the policies developed by the County Council and if this involves them in additional cost there is provision for the County Council to reimburse them. All operators are required to co-operate with each other for the purpose of co-ordinating the passenger transport services within the county. County and district councils have power to make grants towards the cost incurred by any public transport operator.
		National Traffic Forecasts (Interim Memorandum) published It replaced the forecasts contained in Technical Memorandum H3/75.* [132]		The new Memorandum particularly emphasised the uncertainties associated with traffic predictions. It has been compiled in the light of the findings of the Leitch Committee.
		Policy for Roads: England 1978 (Cmnd 7132) published.*		This White Paper sets out the Government's new policies on road construction and gives the first results of a complete review of the trunk road and motorway programme. It replaced the previous annual reports, Roads in England.[133]
		Report on the review of Highway Inquiry Procedures (Cmnd 7133) published. This White Paper is the outcome of a review made by the Departments of Transport and the Environment working closely with the Council on Tribunals.*		This review was announced on 20 January 1976 by the then Minister for Planning and Local Government when answering a Parliamentary Question about the Airedale Motorway Inquiry which had been adjourned because of serious disruptions.[134] Despite this review, there is still continued disruptions or the planners representing the highway authorities are challenged vehemently by anti-road pressure groups which now have a well-organised network of branches.
		During 1978, the Greater London Council published its road plans for the next 15 years.		This plan was abandoned within four years by an incoming Labour Council.
		(continued)		

CENTRAL & LOCAL GOVERNMENT	TRANSPORT PLANNING	ROAD PLANNING	OTHER EVENTS OF INTEREST	COMMENTS On items marked with * in a column to the left
		The Plan was estimated to cost £'100 millions.*		
Conservative Party elected to Government in 1979.				
During 1979, in a response to the Government's call for public expenditure cuts the Association of County Councils produced a plan which amongst other things proposed that: (i) public participation in highways and planning should be reduced, (ii) public transport plans should be abandoned and that (iii) the Transport Supplementary Grant should be combined with the Rate Support Grant abandoning the requirement to submit the Transport Policies and Programme (TPP) document.* 135	During 1979, Greater London Council began the construction of the £103 M second stage of the Jubilee underground line, from Charing Cross to Fenchurch Street in direct defiance of the Government.			Although the requirement to submit TPP was not abandoned, the Government subsequently agreed that TPP preparation may be less elaborate for instance the requirement to submit detailed programme for five years was reduced to three years. Also the possibility of abandoning the TPP process altogether had become a possibility.
	During 1979, the Government refused extra funds to the Tyne and Wear County Council for the latter to complete the Tyne-Wear Metro as planned. But the Department of Transport agreed to support the County Council's application for an EEC grant.136			

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	The Government's White Paper on Public Expenditure published in 1979 programmed for a £204 m drop in spending on roads and transport during 1980. Public transport particularly bus revenue support was heavily slashed. There was marginal reduction in road expenditure.*			Within the reduced budget for highway expenditure, a higher proportion was spent on maintaining motorways that were crumbling due to excessive useage by heavy goods vehicles. For instance, the Department of Transport estimated that "The Northamptonshire section of the M1 is nearly completely worn out and needs reconstructing at a cost of £35 m. The M1 in Leicestershire and Derbyshire needs substantial repairs". Parts of the M6 were already being rebuilt. A Transport and Road Research Laboratory Report refutes the rule that heavy vehicle damage to road pavement is proportional to the fourth power of the axle weight. The report suggests an eight-power formula.[137]
The Local Government Planning and Land (No 2) Bill 1980 enacted.* 138, 139		National Road Traffic Forecasts issued in 1980. It replaced the interim memo. issued in 1978. Cars and taxi traffic is now forecast to increase within a range, with upper and lower limits of 60% and 28% respectively. However the heavy goods vehicle traffic is expected to stabilise broadly within the range of a 4% decline to an 8% increase which is in contrast to the Interim Memo. which suggested a 23% to 39% growth in goods vehicle mileage from 1980 to the end of the century.[140]		The 1980 Bill represents the most important piece of legislation affecting local government since Reorganisation. The proposals include amongst other things the introduction of a new "Block Grant" to replace the current Rate Support Grant, a new system of capital controls, publication of more information about local authority expenditure, activities and performance, new regulations over the management of Direct Labour Organisations, the establishment of Urban Development Corporations, changes in the distribution of planning responsibilities between counties and districts and the repeal of the Community Land Act. In particular, the Bill abolishes the present power of a county planning authority to give directions to a district planning authority as to how it should determine an application for planning permission which would substantially and adversely affect its interests as a county planning authority. A county planning authority will no longer have the power to prevent a district planning authority granting planning permission for development that is not in accordance with the structure plan. In contrast since the highways and transportation decision-making are substantially county matters, the last two steps taken together could lead to serious imbalance in landuse-transport planning issues.

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				Also the Bill enables district councils to adopt local plans in advance of the approval of structure plans. This may well erode the structure plan to that of non-statutory development plan.
	1980: Passenger mileage in GB was 330,000 million, 10% bus, 7% train, 83% rest.	In GB £1979 million was spent during 1980 on the provision and maintenance of roads. Of this sum £825 million was spent on major improvement and new construction.*		1980: Motor vehicles in GB = 19.2 million = 0.35 per person. i.e. 1.9% per annum growth since 1975. Mileage = 178,000 million. Casualties = 329,000 = 1 per 58 vehicles = 1.85 per million vehicle miles. (A fall since 1975 of 13%.)
	Transport Bill 1980 enacted.*	The Highways Act 1980 enacted. This Act is a consolidation of the Highways Act 1959 and the subsequent legislation, principally the Highways (Miscellaneous Provisions) Act 1961 and the Highways Act 1971.[142]	About 200 householders who were affected by motorway noise from the nearby M40 at Gerrards Cross. received compensation of over £500,000.	The main features of the 1980 Transport Bill are – (i) the reduction of controls on express coaches and tours; (ii) the introduction of commuter coach services; (iii) an increase in car sharing; (iv) more local bus services through competition; (v) "trial areas" for completely free competition and (vi) use of school buses to carry fare paying passengers.[143]
	Tyneside Metro began operations in 1980. The network as planned is expected to be complete by 1983.[144]	Lord Denning, in the High Courts, upheld the controversial Windsor Cordon Scheme.*[145]		The scheme involved the establishment of a 9 km cordon west, south and east of the historic Windsor town. Fifty metre sections of selected roads within the cordon were prohibited to commercial vehicles over 5 ton unladen. This effectively made the roads cul-de-sacs and the only way to get through was a permit fixed to the windscreen of the lorry. It is the permits which caused the controversy.
In a judgement issued in 1980, the House of Lords clarified a number of points relating to local public inquiries particularly highway inquiries.*				Key points from the House of Lords ruling are: (i) Local inquiries are set up to advise the Minister on local objections; (ii) Government policy is not open to question; (iii) the evidence and forecasts of Government officials are part of that policy; (iv) The normal rules of court need not apply and that the rules of

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				"natural justice" do not apply as there is no cause of argument between the parties; (v) the inspector has a wide discretion on what evidence to allow; (vi) it is undesirable to allow local inquiries to become a forum for discussing wider issues which should go to Parliament.[145]
Preliminary results of the 1981 census were published a few months after the completion of the surveys.* (see notes 147, 148)	News emerged during 1981, that the Department of Transport is seriously considering the possibility of abolishing the TPP system introduced only during 1975 and also to denationalise the loss-making National Bus Company. The National Bus Company was created during 1968.[149]	After nearly 20 years of planning and construction, Humber Bridge was opened in July 1981. The cost of the bridge is £90 m which was £77 m million more than the original estimate 20 years ago. The design year capacity of the bridge is 50,000 vehicles per day but during 1981 the average flow was only 7,000 vehicles per day. At this rate, doubt is expressed about income from the bridge meeting even the interest payments.		The census results showed that in contrast with all earlier periods recorded, the population of the United Kingdom remained almost static between 1971 and 1981. The population of England and Wales grew by just over 250,000 to 49 million but the Scottish population actually fell by 100,000 to 5.1 million. At the local level, there is evidence of an urbanisation of the countryside at the expense of the older industrial cities. In London and in big cities, the population loss is about 10%, other large cities (Bristol, Cardiff, Derby, Hull, Leicester, Nottingham, Southampton and Stoke on Trent) fell by just over 5% and the smaller cities by about 3%. On the other hand, resorts and seaside retirement towns grew by nearly 5%, the country areas by over 10% and the districts with new towns by over 15%.
The Department of the Environment advised the district councils that small towns and villages that were not likely to change in character would not need the protection of a local plan.[150]	May 1981 local government elections brought the Labour Party to power in many councils. The labour controlled authorities promised a new deal for urban public transport based on a policy of cutting fares and improving services.* 151, 152	An area-wide traffic control system known as SCOOT was installed in London by October 1982. This system responds automatically to prevailing traffic conditions.[157]		Merseyside Passenger Transport Authority introduced a 10% cut in fares and there was talk of eventually offering free travel. In Greater Manchester a fares stand-still was introduced while West Midlands introduced a 23% cut in fares. For bus travel in Greater London, the area was divided into four zones with flat fare of 20p for travel within each zone, or 10p for short journeys. Travel within two zones cost 30p, and within three or four zones 40p. On the underground, there were two Central

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		Winding up of the Road Construction Unit (RCU) sub-units began in 1981. The RCUs were originally created in the mid 60s to undertake the design and construction of major road schemes RCU's work is being largely transferred to private consulting engineers. The changes resulted from Sir Dereck Rayner's review of the Department of Transport's regional organisation.[153]		London zones with a flat rate of 20p for one zone and 30p for two. Elsewhere in Greater London, the fares were reduced by 25%. The fares cut policies in London were in direct contrast to the British Rail's policy of increasing fares and cutting commuter services. The Greater London Council (GLC) supported the fares cut in the buses and the underground, by a supplementary rate levied throughout the GLC area. The policy was opposed by some district councils including Bromley which felt hard hit as the underground does not reach the Borough. GLC's policy was challenged by Bromley District Council in a series of court battles until the Lords finally found against the GLC in October 1981. This decision has led to the GLC dismantling most of the improvements within the year. This decision at the Lords also persuaded some of the provincial county councils also to dismantle their fares cut policies.
		A White Paper was introduced in December 1981 to pave the way for increased maximum permitted gross weight of lorries - from 32.5 tonnes to 34 tonnes in 4 axles to 40 tonnes on five.[154]*		The Government estimated that allowing fewer lorries to be more fully loaded could produce savings in transport costs of around £150 million a year and would reduce road damage by about 5%. However this view is not widely accepted. For instance the local authorities objected to heavy lorries being introduced before there was time to improve the quality of roads.
		A complete set of traffic appraisal procedures were introduced during 1981. These procedures are in line with the recommendations of the Standing Advisory Committee on Trunk Road Assessment (SACTRA).*		The set includes COBA 9, Traffic Apprsaisal Manual (TAM) and Frameworks for Trunk Road Appraisal (TD/8/80 and TA/7/80). Also a departmental standard TD9/81; Road Layout and Geometry was published. It advises on the use of COBA for the detailed design of roads. It is the intention of the Department of Transport that the set of procedures should also be used for the evaluation of urban roads.

2.2 NOTES : CHAPTER TWO

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2. For a short history of transport in UK refer to Chapter 3 of Gwilliam, K.M. and Mackie, P.J. (1975) ECONOMICS AND TRANSPORT POLICY.
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   particularly up to page 369 and pp 611-625
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10. The following annual publications give detailed information on vehicle travel in the United Kingdom.

(i) Department of the Environment, HIGHWAY STATISTICS
London, HMSO

(ii) Department of the Environment, PASSENGER TRANSPORT IN GREAT BRITAIN
London, HMSO

Since 1976 these two publications were replaced by the more comprehensive version "TRANSPORT STATISTICS", the first issue of which is; Department of the Environment: TRANSPORT STATISTICS: GREAT BRITAIN, 1964-1974
London, HMSO

For information on road vehicle casualties before the publication of Transport Statistics, refer to the annual publication, Central Statistical Office, ANNUAL ABSTRACT OF STATISTICS
London, HMSO

11. Wilson, R. (July 1953) The Framework of Public Transport published in THE JOURNAL OF THE CHARTERED INSTITUTE OF TRANSPORT
London, The Chartered Institute of Transport, p 145

12. In addition to references two and three, I have extensively referred to the following encyclopaedias published and regularly updated by London, Sweet & Maxwell Ltd, 11 New Fetter Lane, for information on current statutes.

(i) Heap, D. (1978) ENCYCLOPAEDIA OF PLANNING: LAW & PRACTICE
(ii) Cross, C.A. (1971) ENCYCLOPAEDIA OF HIGHWAY LAW & PRACTICE
(iii) Purdue, M. (1977) CASES AND MATERIALS ON PLANNING LAW
(iv) Cross, C.A. (1981) PRINCIPLES OF LOCAL GOVERNMENT LAW

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(ii) Cross, C.A. (1971) ENCYCLOPAEDIA OF HIGHWAY LAW & PRACTICE
(iii) Purdue, M. (1977) CASES AND MATERIALS ON PLANNING LAW
(iv) Cross, C.A. (1981) PRINCIPLES OF LOCAL GOVERNMENT LAW

13. The following annual publications give detailed information on vehicle travel in the USA -

(i) HIGHWAY STATISTICS
Washington, Bureau of Public Roads

(ii) STATISTICAL ABSTRACTS OF THE UNITED STATES
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20. Thompson, J.M. (1969) MOTORWAYS IN LONDON
op cit p 101

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CHAPTER THREE

IDENTIFICATION OF KEY FACTORS AFFECTING THE IMPLEMENTATIONS OF PLANS BASED ON RECENT RESEARCH

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* * * *

"It is on the law, on the response of the public to proposals for large schemes of expenditure to be undertaken on their behalf, and on the attitude of legislators and administrators to current economic problems as much as (or more than) on technical improvements in the arts of carriage and on the structure of the industry, that the future efficiency of British transport will depend".

— G. Walker and C.J. Savage: 1958[1]

The heart of my research is to study the nature and significance of factors that led to the low implementation of urban transport plans. Therefore, initially my search for recent works was limited to the theory and practice of transport planning. The study of policy execution in transport planning has not attracted much attention by serious professional researchers. In commenting on the low implementation of urban transport plans one must first analyse the factors which might cause it. Frequently such analyses as have been made ascribe the failures to a single dominant cause - e.g: pressure group activities, and then proceed to prescribe remedies to overcome that one problem.[2] I therefore extended my search to include political and social sciences with general emphasis on urban planning.

Most researches completed in this area identify one or more factors affecting the implementation of transport plans which may be loosely grouped into five categories.

(i) Variation in local social objectives, e.g.: as reflected by politicians and pressure groups;
(ii) Economic factors, national and local;
(iii) Conflicting value systems as manifest in national political and pressure groups;
(iv) Technology, the state-of-the-art in both transport and forecasting;
(v) National institutional factors.

3.1 LOCAL SOCIAL OBJECTIVES AFFECTING IMPLEMENTATION

The POLITICS OF URBAN TRANSPORT PLANNING by John Grant is the case study most relevant to my research in this aspect.[3] Grant examines the transportation policy formulation in three U.K. country boroughs - Portsmonth, Southampton and Nottingham between 1947 and 1974. His examination begins with the hypothesis that,

".....there are three major actors who became involved in the transport policy process at the local level. These are the members of the Council; the salaried officers; and groups from the community.....

Interaction between the actors takes place within legal, financial and technical constraints which limit the range of options available ..... Since local policies have varied widely it would seem clear that local policy making systems are indeed able to exhibit a degree of initiative and independence from Whitehall".

He then provides evidence based on transport policy formulation from the three towns to conclude that,

"There is generally a close relationship between the (three) factors to influence the transportation planning and policy making process and the transport policies which developed in each city".

Grant unndertook his research under the supervision of Professor Peter Hall who extended the above theory in his recent book, 'Great Planning Disasters'.[4] Hall attempts to explain why great planning disasters such as Concorde or the London Motorway network occured. He based his explanation on the works of Friend and Joseph who distinguished three kinds of uncertainty in planning denoted as types UE, UV and UR. UE is an uncertainty about the relevant planning environment, i.e. everything outside the immediate decision-making system, such as forecasts of population and economic growth. UR is an uncertainty in related decision areas. It deals with the behaviour of other individual decision makers or these same decision makers. They may be in other organisations, or in other parts of the same organisation. E.g.: a landuse plan being rejected because the surrounding areas are unable to handle the traffic generated. UV is an uncertainty about value judgements, which includes all the problems where information has been assembled, but where the final decisions turns upon questions of value. In any democratic society, however manipulated, it must include the problem of gauging the values of the client population and predicting how these may change over time. E.g.: the London motorways, where the prevailing value system of the population in the early 1960s was in greater freedom to drive their own cars, even in Central London.

By the late 1960s and subsequently, the prevailing values were in favour of restraint of traffic in Central London, and of better public transport. Hall concludes that,

"In some sense, indeed, shifts in values provides the final explanation of everything else: apparent UE or UR problems can all be traced finally to UV explanations ..... consider for instance the London Motorways. They failed partly because of inadequate demand forecasts (UE) and partly because of shifts in general policy which made investment in public transport more attractive relative to investment in urban roads (UR). But the main reason was without doubt a massive shift in values and the expression of these changed values in the political arena."

He substantiates this theory based on six case studies which complements Grant's work.

Somewhat in contrast to the above findings, Griffiths (1966) stated that,

"The surveyor knows more about his job and its problems (whether he sees his problems narrowly or widely) than any one else in the locality. And it is his function to present to his committee the highway schemes which he believesto be of the highest priority ..... Party caucuses seem to exercise little influence over the decisions affecting the selection of schemes and their priority. This is not only because highway construction, improvement or maintenance lack the element which involve party political passions - an element present for example in many educational questions - but also because of their technicalities. It is difficult to have a party line about an improvement line".[5]

However, Griffiths refers to the 1960s and concentrated his efforts on the functioning of county councils as opposed to city councils. Also a number of other research workers dealing with urban political process have provided evidence supporting the importance of party politics in decision-making. In the U.K., party politics are less obvious in county than in city councils.

Decision-making in British local government has been a subject of intense research interest in the U.K. since the study undertaken on behalf of the Royal Commission on Local Government.[6]

The case-study approach is frequently employed for this purpose where the decision-making in a selected town is studied. The conclusions by Newton, Dearlove and Wiseman are typical of those arrived by the range of the U.K. publications in this field.[7,8,9]

Newton studied the democratic processes and decision-making in Birmingham. His conclusion was that the party hierarchy and the bureaucracy were equally responsible for decisions.[10] Dearlove studied the case of the Royal Borough of Kensington and Chelsea where the Conservative party had a strong majority. In this case, the author concluded that the party political leadership was substantially responsible for decision-making in consultation with their officials who saw their role as that of implementing the decisions. Wiseman reporting on his experience in Leeds during 1951 to 1960 stated that,
"The Council Group, consisting of all the majority party aldermen and councillors is the supreme controlling body ..... Official advice is channelled through the leader, the Deputy and the chairman of the various committees of the Council ..... whatever the advice, responsibility for acting upon it rests with the majority party".[11]

Boaden is one of a very few researchers who used statistical analysis to study urban policy-making in England and Wales. One of his conclusion was that:

"Councillor disposition measured in party terms was the most relevant variable (to affect service provisions)"[12]

Generally, case studies completed before the 70s did not consider local pressure group activities as an important factor in decision-making. For example

Newton reported that,

"The main feature of these results is that although council members belong to many organisations, and often give assistance to them they are less likely to make use of them as sources of collective opinion about public matters".[13]

However, these comments may be the result of analysing a large number of routine decision-making that takes place in a council.

Pressure by more powerful groups may be reserved for special occasions such as when the council deliberates on the provision of major urban roads. Secondly, as shown by Mick Hammer and others, before the 1970s, pressure group activities in transportation was dominated by the highway lobbies, the most prominent of them being the British Road Federation.[14] A large number of anti-road lobbies were established in the 1970s, e.g.: Transport 2000. These lobbies have put forward a number of alternative solutions to tackle local transport problems.

Those by Transport 2000 and London Amenity and Transport Association are of particular interest in this respect.[15,16]

I have devoted chapters 11, 12 and 13 to analyse the influence of local social objectives (as reflected in party politics, by professional groups and by pressure groups) on plan implementation.

Research methods to study urban policy-making, employed in the U.K. have their origins in the U.S.A. The "reputational approach" suggested by Hunter in 1953 is the method favoured by sociologists.[17,18] It is based on asking a selected number of interviewers to name and rank the influential people in the city. The people named most frequently were classified as forming the city's power structure. The political scientist has frequently used the "decisional approach" first suggested in the U.S.A. by Edward Banfield and Robert Dahl in 1961. Instead of studying the reputation for power, the work attempted to get a picture of real power by analysing actual decision. By using interviews, newspaper reports, official documents and participant observation, the aim is to reconstruct political decisions in order to see who initiated them, who opposed them and who won and lost the political battle. However, because of the significantly different systems of local government operating in the U.S.A., the results of these studies may well be somewhat misleading for application to the situation in the U.K.

3.2 ECONOMIC FACTORS, NATIONAL AND LOCAL

In a number of letters received by me during the past three years from the chief engineers of various councils, cut-back in economic reasons was blamed for low implementation of plans. For instance, the Director of Engineering for the Sunderland Borough Council wrote that,

"the explanations as to why schemes ..... did not proceed was, and still is, simply that there was not sufficient funds available for the overall requirements for highway construction".[19]

Similarly, referring to the South East Lancashire North East Cheshire (SELNEC) Highway Plans proposals for the city of Salford, the City Technical Services Officer stated that,

"Delays have been entirely due to financial constraints"[20]

However no research studies have considered cut-back in expenditures as even a probable cause for low implementation of plans. This could be because transport expenditure by public authorities in U.K. has increased by more than 50 percent in real terms over a decade from the mid-60s. Overall cut-back in transport expenditure has occured only since 1976. In chapter 7 and 11, I will deal with the effects of national and local economic resources on the implementation of transport plans respectively, while in chapter 15, the applicability of my findings after local government re-organisation is discussed.

3.3 VALUE-SYSTEMS AS MANIFEST IN NATIONAL POLITICAL AND PRESSURE GROUPS

"I knew that the early Edwardian motorists, as portrayed by Mr. Kipling, or personified by Kenneth Graham's Mr. Toad, has been not only a minority, but an unpopular minority, and had been treated accordingly, at least in the courts.[21] Had there come a moment at which the number of motoris ts had grown so great that politicians had no longer dared to offend them by trying to keep them in check? Or was it that the general public has eventually become indifferent to the motor car with the result that the motorists were able to persuade the politicians to remove existing restrictions? Or was it misleading in either case to concentrate on the politicians: was this an area in which policy had been made by civil servants; perhaps for administrative rather than political reasons, and then pressed successfully on their masters".

In 1971, William Plowden concluded his research to answer the above questions as follows:[22]

"..... to explain official policy as a whole as the product of successful lobbying would be profoundly to misunderstand the character of British Government and the ways in which decisions

on policy are - and have been made ..... traditionally 'motor car policy' rested on the principle that government need not have a motor car policy (insofar as having a policy meant defining national objectives and working toward them) ..... The history of the motor car, at least until 1970, is a story of choices not made, not even defined, by Government - and consequently made by default".

However, Mick Hamer in 1974 wrote,

"The road lobby is the strongest and most politically active pressure group seeking to shape the future of this country.[23] It is understanding of the mechanics of political processes at both national and local levels is unparalleled amongst lobbying groups ..... What may give cause for concern is not that the lobby exists, but whether or not the extend to which it influences government thinking is genuinely in the public interest".

Anti-road lobbies have gained wide-spread public support in the mid-1970s. They normally concentrate their en ergies in opposing trunk-road schemes, particularly motorways. For instance, John Tyme in his book "Motorways versus Democracy" describes the trail of motorway inquiries he has resisted.[24] However, as opposed to motorways which are generally located in rural areas, it is urban road construction that was largely abandoned. Motorway construction has progressed steadily even after the mid-70s albeit at a slower pace.

In this research (see chapter 8) it is shown that national political and pressure group activities were not directly responsible for the low implementation of urban transport plans.

3.4 TECHNOLOGY - THE STATE OF THE ART IN BOTH TRANSPORT AND FORECASTING

Almost as soon as the Buchanan Report was published a school of thought developed which continued to question the validity of that report. For instance, Reynolds in 1966 stated,

"Although one cannot but admire the imaginative contributions of Professor Buchanan and his team, closer inspection has revealed serious doubts.[25,26] This attempt to apply the proposals of Traffic in Towns has revealed gaps which have not been filled by subsequent work or developments.

Though the concept of environmental area seems valuable and is likely to endure, it was inadequately analysed in the report and its application remains somewhat obscure. Moreover, although in the longrun adequate resources for substantial road investment (assuming that it is justified) could conceivably be made available if alternatives were sacrificed, the concept of optional traffic and the question of what proportion to accommodate by road investment or eliminate by restraint seem nonetheless insoluble.

Equally seriously.....resources cannot be provided by rhetorical statements on the impossibility of accommodating hypothetical estimates of future traffic volumes; and it is by no means certain that these will occur".

Since the late-60s, a number of non-traditional solutions have been prescribed to solve urban transport problems[27] and suitable institutional changes, for instance the enactment of Transport Act 1968 have been made. This might have resulted in the implementation of alternative solutions.

Also a number of researchers have identified serious forecasting deficiencies in the urban modelling processes.[28] Mackinder reported in 1979 that,

"Over the last fifteen years some transport planning techniques have been abandoned, some have been modified or made more complex, and many others have continued to be used inspite of criticism".[29]

In chapter 9 of this thesis, I have assessed the effect of predictive inaccuracies as a reason for the low implementation of plans and I have examined the effectiveness or otherwise of "non-traditional" solutions referred to above. These include measures to subsidise or otherwise favour public transport, parking-restraint and traffic management measures.

3.5 NATIONAL INSTITUTIONAL FACTORS

In one sense local authorities are wholly subject to central control, for Parliament is theoretically omnipotent. Parliament may allocate functions to the councils or take them away. It may prescribe how those functions shall be carried out and may change the strucutre of local government as it chooses.

However neither Ministers nor the departments have an overall control of the work of local authorities. All formal control must be specifically authorised by statute.

I have identified in chapter 2 a large number of statutes and circulars that could have affected the implementation of plans. Many accounts exist of the ways in which particular pieces of legislation affect aspects of transport provision however none of these provide an overall assessment of the effect on the implementation of plans.

Statutory powers may be vested directly on local authorities or through Ministers of State. They, acting through their departments, can control the implementation of transport plans in variety of ways. Griffith described the working relationship between government departments and local authorities as,

"formal, informal, statutory, non-statutory, legal, extra-legal, financial, official, personal, political, functional, tragical-comical-historical-pastoral".[30]

Ronald Newman undertook a particularly dramatic case-study of road planning in Oxford to illustrate an agency-depending relationship between Central and local governments.[31] A number of other authors including Deegan and Williams have also claimed that at times central government department's treat local authorities more as out-posts rather than as independent organs of government.[32,33]

However Boaden provided evidence based on variations in service provisions between one town and another to claim that,

"Central control is less apparent in policy out-comes than might have been supposed.[34] Variation in such outcomes is not to be explained simply by the divergent size of authorities, nor by their divergent domestic resources. It may thus be legitimate to treat local authorities or at any rate, county boroughs as authoritative allocators and some of the determinants of their allocations as lying among as yet unexplored local features".

I have assessed the influence of national institutional factors and allowed for them throughout this study.

3.6 CONCLUSION

Analysis of recently published results indicate one or more of the following factors, which are loosely grouped into five categories, to have possibly affected the implementation of plans.

(i) Variation in local social objectives, e.g.: as reflected by politicians, bureaucrats and pressure groups;

(ii) Economic factors, national and local;

(iii) Conflicting value systems as manifest in national political and pressure groups;

(iv) Technology, the state of-the-art in both transport and forecasting;

(v) National institutional factors

* * * *

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CHAPTER FOUR

THE IMPLEMENTATION RATIO : A NEW MEASURE FOR ASSESSING TRANSPORT PLANNING

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"The conurbation transport and landuse surveys ... were started by my predecessor and by myself. ... All of them are of very long term because they are not just traffic surveys, they are transportation and landuse surveys and they will be of very great importance. It will not be possible to determine the full range of transport services in the conurbations until these studies are carried out ..."

Minister of Transport: 16th November 1965
Debate on Queen's Speech

The purpose of this chapter is to identify the objectives of preparing landuse-transport plans and to formulate a new measure for assessing the fulfillment of these objectives.

4.1 OBJECTIVES OF PREPARING TRANSPORT PLANS

It is always difficult to define the precise benefits of a particular piece of planning, to measure its contribution to subsequent national wealth and happiness.[2] It may fulfill the ambitions of a particular politician or further the career of a particular consultant but I seek more public criteria than these. A characteristic of contemporary road transport is that over the long term, actual demand adjusts to supply, so that in retrospect most transport investments look either beneficial (on the basis of before and after studies) or essential according to wider social criteria. It is thus a poor test of transport planning merely to ask whether projects recommended and implemented did prove successful. It seems more reasonable to judge plans by the objectives of the politicians and their paid professional advisors who participated in preparing them. These objectives normally form part of the terms of reference for any study. The terms of reference declared in a sample of published plans are presented below in order to identify the objectives.

4.1.1 Merseyside Area Landuse/Transportation Study

The project report to the Merseyside Area Landuse/Transportation Study contains the following terms of reference:

"The proposed study of long term needs would provide the Committee (on Merseyside Traffic and Transport) with an outline of the location and nature of the prime transportation requirements associated with a selected landuse plan for 1991 and a suggested phasing of implementation ...[3]. The transportation policy plan will identify areas where present or future transportation deficiencies exist. It will indicate the desireable balance between public and private transport. Whilst actual

physical locations and configurations will not be specified, the kind of facilities and the type of public transport service to be provided will be determined. That is, the need for a widened street, a three-lane dual carriageway or a new motorway will be established. Similarly, whether the demand for public transport is large enough to justify exclusive bus-lanes or to support express bus services or rapid rail transit will also be established. The location of major motorway junctions and transit stops will be shown ...."

4.1.2 Tyne Wear Plan - Transport Plan for the 1980's

The following are some of the policies and goals that were agreed between the consultants and the Technical Steering Committee.[4]

1. A high quality inter-urban road system will be developed.
2. A high quality road system within the urban areas will be developed, with particular attention to the requirements for the movement of buses and commercial vehicles.
3. The ability to enjoy the benefits of the motor car will be sought, with due regard for road safety and protection of the quality of urban life.
4. Public and private transport will receive equal attention in the assessment of mobility.
5. The transport plan is to provide for full co-ordination of public transport, traffic management, road construction and parking policy, all in accordance with an appropriate landuse plan.
6. The public transport element of the plan must provide a good quality service in which bus and rail services are fully integrated. Any rail services that are in the plan will be fully modernised and improved.

A financial constraint was also accepted, and based on information from the Ministry of Transport it was agreed that the total transport plan should be made within a budget of £180 to £200 million at the then current prices.

4.1.3 South East Lancashire North East Cheshire: A Highway Plan 1962

The introduction to the SELNEC Highway Plan states that,
"Following a meeting of the Clerks and Surveyors to the County and County Borough Highway Authorities in South East Lancashire and North East Cheshire, the Divisional Road Engineer (North Western) suggested in November 1958, that as a first step towards the formulation of a long-term highway programme for classified roads, the problems involved should be examined by a Committee consisting of the Surveyors. This course was agreed by each of the Authorities."[5]

4.1.4 Oxford Central Area Study

"We were appointed in September 1966 by the City Council acting in association with the Ministry of Housing and Local Government and the Ministry of Transport to undertake a study to determine appropriate environmental standards for the Central Area of Oxford and to decide on the road and traffic system that would be most suitable for achieving these standards. In particular, we were asked to examine possible routes for a relief road for the central area, including the Meadow Road as proposed in the City Development Plan Review."[6]

Oxford Central Area Study
December 1968

4.1.5 Bath: A Planning and Transport Study

The terms of reference for this study are,
"To consider the traffic problems in the City as a whole, to advise on the primary (highway) network and environmental area system, to give special attention to the problems arising in the central area and to consider the balance between private and public transport."[7]

4.1.6 In-house Studies

A number of studies completed in-house by the officers to the authority do not state explicitly any terms of reference. However the recommendations imply that the only objective of most studies was to prepare a future highway plan for the study area. For instance, the Outline Transportation Plan for the City of Southampton states that,

"The report puts forward transportation proposals for Southampton and indicates how these fit in to the international, national, regional and sub-regional transportation pattern. The principles of two recommended inter-related road networks (regional road network and city road network) are described."[8]

In the publication, Traffic in Nottingham : A Traffic Plan for the City, it is stated that,

"The Traffic Plan was selected as the first subject of the city's replanning to be presented because traffic is the major urban planning problem that must be solved most urgently, and whose solution will make other planning objectives easier to obtain ..... The major subject of the present Report is the Primary Highway Network."[9]

An in-house study in which the aims are explicitly stated is the Hertford Ware and Hoddesdon Transportation Study. This was conducted by the officers of the Hertfordshire County Council. The aims of the study are,

(i) To forecast the volume and nature of demand for personal and goods transport in the study area when the vehicle ownership of the planned population has reached saturation level and at intermediate stages.

(ii) To assess alternative ways of meeting the expected demand and their effect on landuse.

(iii) To plan a phased network of primary roads and environmental areas as a basis for building development, re-development and budgeting for expenditure on roads.

(iv) To provide information and techniques which can be used elsewhere in the County.

Based on evidence such as that above, I conclude that the primary objective of transportation studies, completed in the past two decades, was to forecast the local traffic growth over the study period, normally over 15 to 20 years and to SPECIFY in detail a PLAN for efficiently catering for it through infrastructure investment, essentially roads. Plowden, Atkins and a number of those who submitted evidence to the Environment and Home Office Sub-Committee on Urban Transport Planning also confirm my view of the primary objective of transportation studies.[10,11,12]

It has been observed that the preparation of transport studies resulted in secondary benefits such as the enlightenment of planners.[13] Such "spin-offs" were rarely mentioned at the time the studies were commissioned, and are in any case rather intangible.

4.2 IMPLEMENTATION MEASURES TO ASSESS THE SUCCESS OF TRANSPORT STUDIES

The first test of success of transport studies should be an assessment of fulfillment of the primary objective, in other words a measure of similarity between the investment pattern (plans) that the studies recommend and subsequent actual investment. This is called an implementation measure. It records directly whether the plan was acceptable. It also indicates indirectly whether the plan was robust, in the sense that the projects it contained were still seen to be beneficial some years after the plan's completion.

A transport plan specifies a sequence of discrete investments or projects. A measure of implementation could record how CLOSELY the recommendations were followed, whether they were followed at the specified RATE or whether in the specified ORDER. I have however disregarded the last of these measures because most transport plans do not give an ordered programme of work for implementation. Even in the few cases where such a programme was given, (for instance lists were readily available in the case of conurbation studies) it is always difficult to interpret meaningfully the delays associated with the implementation of individual projects. I have derived separate measures for the first two criteria. These are called the "quantitative" and "rate" measures respectively.

4.2.1 Quantitative measure of implementation

Where a high proportion of actual investment in new infrastructure is for projects contained in the long-term plan, there would appear to be continuing confidence in the plan. Conversely, where many projects undertaken during the plan period lie outside the plan, it is possible that the latter is too inflexible to accommodate changes in socio-political and economic goals. An informative measure is thus:

$$MQ = 100X \frac{\text{LEVEL OF NEW INFRASTRUCTURE BOTH RECOMMENDED AND IMPLEMENTED}}{\text{LEVEL OF ALL NEW INFRASTRUCTURE IMPLEMENTED IN THAT PERIOD}}$$

giving MQ = 100 when only planned facilities were built. MQ will be zero when the plan has been totally disregarded and all capital projects undertaken were outside the plan.

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giving MQ = 100 when only planned facilities were built. MQ will be zero when the plan has been totally disregarded and all capital projects undertaken were outside the plan.

4.2.2 Rate measure of implementation

As the rate of implementation of projects is rarely higher than that which was planned it is also useful to calculate the rate measure:

$$MR = 100 \times \frac{\text{LEVEL OF NEW INFRASTRUCTURE BOTH RECOMMENDED AND IMPLEMENTED}}{\text{LEVEL OF ALL NEW INFRASTRUCTURE RECOMMENDED FOR THAT PERIOD}}$$

and employ it as a test of plan realism.

MQ and MR have the same numerator. They have been expressed in terms of "levels" of investment. These levels can be defined in either physical or financial terms, each having particular difficulties of application. Using financial units, MQ and MR become FMQ and FMR respectively, where, for example.

$$FMR = 100 \times \frac{\text{COST OF THOSE PROJECTS PLANNED AND IMPLEMENTED}}{\text{COST OF ALL PROJECTS PLANNED FOR THAT PERIOD}}$$

The difficulties associated with quantifying physical measures are more severe than those associated with the financial ones. A convenient physical measure would be one actually quantified in the recommendations of transport studies, capable of accumulation over the full range of projects and usable with available data. None of the popular physical measures (such as lane-miles of highway, route-miles of bus service, capacity of Metro) satisfy all these conditions. Moreover, simple physical measures cannot handle important variations in quality such as speed, safety or comfort. For the above reasons, I have primarily directed my attention to the two financial measures of plan implementation, FMQ and FMR.

4.3 THE FINANCIAL MEASURES FMQ AND FMR

The cost of projects planned - the denominator of the financial rate measure FMR, is normally given in the published plan. Where a programme of expenditure is not published, the relevant local council will normally have sufficient details. It is in the evaluation of the numerator of FMR that difficulties arise.

To apply financial measures it is necessary to allow both for inflation and for differences between the actual costs of particular projects and those assumed in the plans. Corrections for inflation are standard practice: the national highway price index given in figure 4.01 has been used in calculating FMQ and FMR. Residual discrepancies after correction for national inflation are due to regional or project-dependent variations in the inflation index and to the difficulties involved in accurately costing the projects. These discrepancies can be kept within reasonable bounds by the use of the following hybrid approach to the calculation of FMQ and FMR.

Examination of the schemes completed in any sizeable study area will usually reveal a group that were undertaken directly according to plan. For this group, actual costs suitably scaled for inflation can be compared with the plan estimates. If they agree closely, all the estimates for that type of scheme within the study area are accepted as satisfactory for the calculation of implementation measures. If however, there is substantial disagreement, physical measures of implementation will be less misleading than direct financial ones. These physical measures are then converted into pseudo-financial ones for purposes of calculation. In this respect, the usual practice is to allow 10 per cent of the estimated cost of schemes for contingencies. I have also used this cut-off point as an acceptable level of disagreement before pseudo-financial measures are applied.

The Merseyside Area Landuse/Transportation Study includes examples of both situations.[14] For surface level roads completed between 1966 and 1976, the ratio of estimated costs to inflation corrected actual costs is 0.99, an excellent match. For the Second Mersey Tunnel and for public transport infrastructure, however, the corresponding ratios are so far away from unity that the estimated costs for completed schemes must be substituted for actual costs if meaningful implementation measures are to be calculated.

FIGURE 4.01 - HIGHWAY CONSTRUCTION COST INDICES[15]

YEAR	1963	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
INDEX	76	79	79	83	85	88	92	100	107	112	137	189	212	199	238	283

Apart from costing discrepancies, three other situations require special treatment in the calculation of measures of implementation. Procedures for handling three of these situations - "committed schemes"; partial implementation; and changes in road status - are discussed below.

The category of "committed schemes" normally appears in a transport plan. The STATUS QUO assumed by the planners is usually whatever exists at the beginning of the plan preparation perioć plus a number of schemes specified by the client as being already in the pipeline. I contend that the assumptions about the length of the pipeline are often unrealistically high and that any committed projects not already commenced by the publication date of a transport plan should be regarded as part of the plan itself. This view is in agreement with a number of authors who have submitted evidence to the Environmental and Home Office Sub-Committee on Urban Transport Planning during 1972-73.[16]

Transport planners are in a strong position to dissuade their clients from spending on supposedly committed schemes if they conflict with the plan. In this respect it is worth noting that the financial losses involved in withdrawing schemes that have not reached the exchange of contract is not excessive. Moreover, the rate of implementing committed schemes in the two to three years following plan publication is normally little higher than the rate of implementing the new schemes of the plan proper (see figs. 5.05 to 5.07). In the calculation of implementation measures, no distinction is therefore admitted between committed and other schemes except where implementation has started before the plan is published.

Secondly, some plan recommendations are so modified before implementation that a decision is required as to whether the project actually carried out belonged to the plan or not. A completed scheme has been treated as belonging to a plan only if it does not create substantially different pattern of traffic flows to those intended in the plan. In practice these plan modifications do not create too much difficulty in assessing implementation rates. Major changes in location of new road or track are regarded as abandonment of the plan; changes in scale of new infrastructure is automatically allowed for by use of financial rather than physical implementation measures.

Occasionally, responsibility for a new road is so changed as to transfer it from local to national status or vice versa. Clearly such a road must be treated consistently, and in this exercise it has been assigned its final status where the project has been at least partially implemented.

There is one circumstance under which any measures of implementation will be noisy and of little meaning, namely where the plan contains an area with only a few distinct schemes, e.g: the small-town studies given in Fig: 5.07 Here, I do not recommend division of the results for further analysis.

4.4 CONCLUSION

The objective of transport studies is to forecast the future growth in travel demand and to specify means of efficiently catering for it by infrastructure investment. The success of transport plans may be measured on the basis of this objective. Two measures were constructed for this purpose. Firstly, the quantitative measure which is a ratio of the level of new infrastructure both recommended and implemented to the level of all new infrastructure implemented in a given period. Secondly, the rate measure which has the same numerator as the first but the denominator is the cost of all projects planned for that period.

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13. SECOND REPORT FROM THE EXPENDITURE COMMITTEE; ibid p. 21 Also; Solesbury, W. and Townsend, A. (Vol. 41, 1970) Transportation Studies and British Planning Practice published in TOWN PLANNING REVIEW

14. MERSEYSIDE AREA LANDUSE/TRANSPORTATION STUDY; ibid, pp.X1-X111.

15. These figures were kindly supplied by the Economics Highways Division of the Department of Transport.

16. SECOND REPORT OF THE EXPENDITURE COMMITTEE (VOLUME II) ibid pp. 92, 231-232 and 255.

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12. Environment and Home Office Sub-Committee on Urban Transport Planning (Dec. 1972) SECOND REPORT FROM THE EXPENDITURE COMMITTEE: MINUTES OF EVIDENCE (VOLUME II) H.M.S.O., London; pp.3, 17-20, 77, 155, 164, 176, 240-242, 255, 266 and 476.

13. SECOND REPORT FROM THE EXPENDITURE COMMITTEE; ibid p. 21 Also; Solesbury, W. and Townsend, A. (Vol. 41, 1970) Transportation Studies and British Planning Practice published in TOWN PLANNING REVIEW

14. MERSEYSIDE AREA LANDUSE/TRANSPORTATION STUDY; ibid, pp.X1-X111.

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16. SECOND REPORT OF THE EXPENDITURE COMMITTEE (VOLUME II) ibid pp. 92, 231-232 and 255.

CHAPTER FIVE

EVIDENCE OF LOW IMPLEMENTATION OF TRANSPORT PLANS

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CHAPTER FIVE

EVIDENCE OF LOW IMPLEMENTATION OF TRANSPORT PLANS

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In this chapter, firstly I will provide quantitative evidence based on implementation ratios to show that landuse - transportation plans were poorly implemented, but were not effectively superceded. Secondly, I will suitably divide the results so that further analysis to identify the factors that significantly affected the implementation of plans, may be completed in subsequent chapters.

5.1 SELECTION OF STUDIES

Nearly 120 transportation studies were completed in England over the past two decades. Of these half were published before 1972. I have limited my quantitative analysis to studies published in England before 1972 for reasons given later in this chapter (see page 5.9). A list of 61 studies within this category is given in figure 5.01 (table). A sample of 18 studies was selected from this list to reflect the overall distribution of studies through time - pre 1964, 1964-66, 1967-1969 and 1970-72 (see Fig. 5.02 (table)). A check was also kept at the same time to ensure that a reasonable distribution of studies by population of the study area is obtained (see Fig. 5.03 (table)).

With respect to the last table, it is worth noting that the percentage of studies selected from towns with population less than 100,000 is significantly lower (19%) than the percentage selected from the other two groups. I did not wish to adjust this imbalance for the following two reasons.

Firstly, a large proportion of small town studies were published in the early 70s. Therefore if I were to select a higher percentage of small town studies it would have created an imbalance in the distribution of studies by time period.

Secondly, as explained in the previous chapter (see page 4.08), I wished to avoid a preponderance of small town studies in my sample because of the unreliability in detailed analysis of FMR based on towns with only a few district schemes.

DETAILS OF 61 STUDIES PUBLISHED BEFORE 1972 - FIGURE 5.01

STUDIES SELECTED FOR CALCULATION OF IMPLEMENTATION RATIOS ARE MARKED WITH AN *

NAME OF STUDY	POPULATION IN THOUSANDS		
	OVER 300	300-100	LESS THAN 100
PRE 1964			
1. Liverpool Merseyside Conurbation Traffic Study	•		
2. Tyneside Major Highways Programme	•		
3. South East Lancashire North East Cheshire (SELNEC) Highway Plan	*		
1964 - 1966			
4. Bath Traffic Survey		*	
5. Halifax		•	
6. Leicester		*	
7. West Midlands	•		
8. St. Neots Area Transportation Survey		•	
9. Ealing Transporation Survey		•	
10. Kendal Traffic Plan Survey			•
11. Portishead Traffic Survey			•
12. Portsmouth		*	
13. Nottingham	*		
14. Playmouth and District Landuse Transportation Study		•	
15. Eastbourne Transportation Study			•
16. Leamington Spa Transportation Survey			•
1967 - 1969			
17. Blackpool Transportation Study		•	
18. Bournemouth		•	
19. Brentwood			•
20. Brighton Landuse Transportation Study	•		
21. Bristol Eastern Fringe			•

FIGURE 5.01 - CONTINUED

NAME OF STUDY	POPULATION IN THOUSANDS		
1967 - 1969	OVER 300	300-100	LESS THAN 100
22. Carlisle			•
23. Cheltenham			•
24. Colchester			•
25. Coventry (Phase 1)	*		•
26. Exeter (Phase 1)			•
27. Hertford, Ware & Hoddesdon			*
28. South West Hertfordshire		•	
29. West Hertfordshire		•	
30. Hitchin, Letchworth, Baldock			*
31. Hull		•	
32. Maldon			•
33. Merseyside Area Landuse Transportation Study	*		
34. Oxford Central Area Study		*	
35. Sheffield - Rotherham LUTS	•		
36. Swindon major highways plan		•	
37. Southampton Outline Transportation Plan		*	
38. Teesside Survey and Plan	*		
39. Torbay		•	
40. West Yorkshire Transportation Study	•		
41. Windsor Traffic Survey			•
42. Worcester Landuse Transportation Study			•
43. Worthing			•
1970 - 1972			
44. Abingdon Transport and Environment Study			*
45. Didcot, Abingdon Wantage Transportation Study			*

FIGURE 5.01 - CONTINUED

NAME OF STUDY	POPULATION IN THOUSANDS		
1967 - 1969	OVER 300	300-100	LESS THAN 100
22. Carlisle			•
23. Cheltenham			•
24. Colchester			•
25. Coventry (Phase 1)	*		•
26. Exeter (Phase 1)			•
27. Hertford, Ware & Hoddesdon			*
28. South West Hertfordshire		•	
29. West Hertfordshire		•	
30. Hitchin, Letchworth, Baldock			*
31. Hull		•	
32. Maldon			•
33. Merseyside Area Landuse Transportation Study	*		
34. Oxford Central Area Study		*	
35. Sheffield - Rotherham LUTS	•		
36. Swindon major highways plan		•	
37. Southampton Outline Transportation Plan		*	
38. Teesside Survey and Plan	*		
39. Torbay		•	
40. West Yorkshire Transportation Study	•		
41. Windsor Traffic Survey			•
42. Worcester Landuse Transportation Study			•
43. Worthing			•
1970 - 1972			
44. Abingdon Transport and Environment Study			*
45. Didcot, Abingdon Wantage Transportation Study			*

FIGURE 5.01 - CONTINUED

NAME OF STUDY	POPULATION IN THOUSANDS		
1970 - 1972 (Cont.)	OVER 300	300-100	LESS THAN 100
46. Barnsley			•
47. Cambridge Transportation Study		*	
48. Canterbury			•
49. Corby			•
50. Coventry Solihull Warwickshire Sub-Regional	•		
51. Study			
52. Doncastor Transportation Study			•
53. Grimsby Landuse Transportation Study		•	
54. South Hampshire Sub-Regional Study	•		
55. Harlow			•
56. High Wycombe			•
57. Tyne Wear Landuse Transportation Plan	*		
58. Warwick - Leamington Transportation Study			•
59. Weston Super Mare			•
60. Wigan			•
61. Slough Transport Plan		*	

FIGURE 5.02 (Table)

PERIOD	NO. OF STUDIES PUBLISHED	NO. OF STUDIES SAMPLED	PERCENTAGE SELECTED
PRE - 1964	3	1	33
1964 - 1966	13	4	31
1967 - 1969	27	7	26
1970 - 1972	18	6	33
TOTAL	61	18	30

TABLE COMPARING NO. OF STUDIES PUBLISHED IN A TIME PERIOD VERSUS STUDIES SAMPLED IN THE TIME PERIOD.

FIGURE 5.03 (Table)

POPULATION GROUP IN 10^3	NO. OF STUDIES PUBLISHED	NO. OF STUDIES SAMPLED	PERCENTAGE SELECTED
OVER 300	14	6	43
100 - 300	21	8	38
LESS THAN 100	26	5	19
TOTAL	61	18	30

TABLE COMPARING NO. OF STUDIES PUBLISHED IN A POPULATION GROUP VERSUS STUDIES SAMPLED IN THE GROUP.

5.2 DISCUSSION OF PRELIMINARY RESULTS

Figure 5.04 (table) gives cumulative implementation ratios in 1978 for the 18 sample studies including those shown in figures 5.5 to 5.7.[1] An example illustrating the calculation of cumulative implementation ratios based on the implementation of individual schemes contained in the SELNEC Highway Plan is given as § 5.7 at the end of this chapter. A similar methodology was used for evaluating the other 17 sample studies. Summary tables for these are given in Appendix 1 at the end of this thesis. In fig. 5.04 (table) and also in figs. 5.5 to 5.7, the fortunes of trunk roads are distinguished from those of other roads. The following features are worth noting from the figures and table.

Firstly, the overall RATE measure of implementation (FMR) of non-trunk (other) roads is low. Although the QUANTITATIVE implementation measure (FMQ) of non-trunk roads for all the studies shown in Fig. 5.4 (table) is 96 percent, the corresponding RATE measure is only 28 percent. Thus the non-trunk road plans were poorly implemented, but were not effectively superseded.

Secondly, in contrast to other roads, the trunk roads had quite high rate measures of implementation. It should be noted that although trunk roads are shown in Fig.5·4(table) the studies themselves generally had no responsibility for trunk roads.

This difference in implementation between trunk and other roads illustrates the important difference in "success" between central and local road planning.

Thirdly, the implementation ratios for non-trunk roads in historic cities are particularly low. Where little investment took place, the quantity measure FMQ can be misleading. However, looking at the rate measures (FMR) alone, the three areas designated historic, had an average FMR approaching "zero" up to 1978.

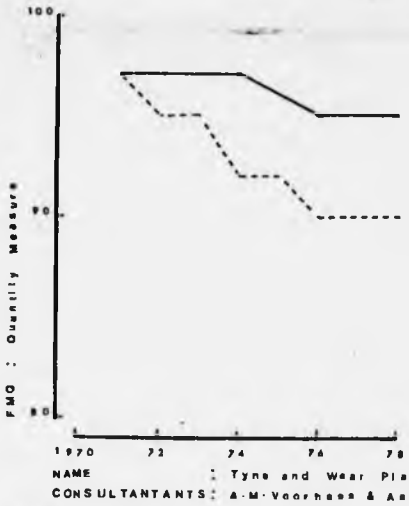
In the rest of this chapter, I will suitably modify the format of FMR relating to non-trunk roads so that in subsequent chapters, further analysis may be undertaken to explain the reasons for the wide variation and in most cases low measure of implementation of non-trunk road plans.

FIG. 5.4 (table)

COMPARATIVE PERFORMANCE OF ENGLISH TRANSPORTATION STUDIES

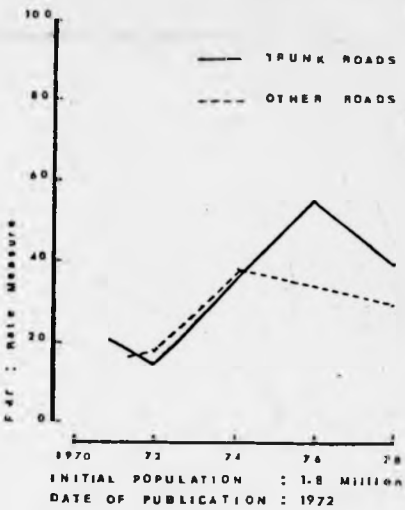
		Cumulative measures of implementation up to 1978 (to nearest 5 per cent)			
		Trunk		Others	
		FMQ	FMR	FMQ	FIR
	Metropolitan Area Studies				
1.	Tyne and Wear Plan 1972 (without public transport works)	90+	40	90	25
2.	Merseyside Area Land-Use/Transportation Study 1969 (without public transport works)	90+	90+	90+	60
3.	South-East Lancashire North-East Cheshire Highway Plan 1962	90+	70	90+	20
	County Borough (pre-1974) Town Studies				
4.	St. Helens Traffic and Transport Plan 1971	90+	90+	90+	15
5.	Coventry Transportation Study (Phase 1) 1968	90+	90+	90+	20
6.	Southampton Outline Transportation Study 1968	90+	60	90+	20
7.	Teeside Survey and Plan 1968/69	90+	60	90+	55
8.	Portsmouth Future Road Pattern 1965	90+	90+	90+	40
9.	Nottingham: Traffic in Nottingham 1965-2005	90+	90+	10-	10-
10.	Leicester Traffic Plan 1965	90+	90+	20	10-
	Historic Town Studies				
11.	Cambridge Transportation Plan 1972	90+	90+	10-	10-
12.	Oxford Central Area Study 1968	90+	90+	10-	10-
13.	Bath: A Planning and Transport Study 1965	90+	90+	10-	10-
	Small Towns and Rural Area Studies				
14.	Abingdon Transport and Environment Study	90+	90+	10-	10-
15.	Slough Transportation Study 1971	90+	10-	90+	35
16.	Didcot/Abingdon/Wantage Transportation Study 1970	90+	90+	10-	10-
17.	Hitchin/Letchworth/Baldock Transportation Study 1968	90+	10-	10-	10-
18.	Hertford, Ware and Hoddesdon Transportation Study 1968	90+	60	20	15

FIG. 5.05 (B)



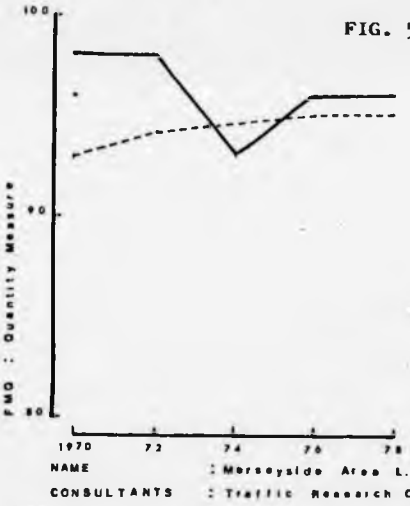
NAME : Tyne and Wear Plan
CONSULTANTANTS : A·M·Voorhees & Assoc. Ltd

FIG. 5.05 (a)



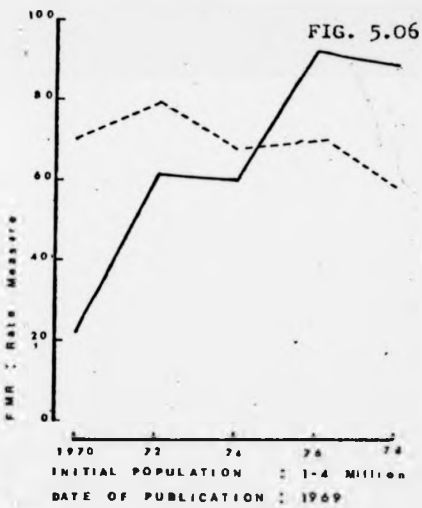
INITIAL POPULATION : 1·8 Million
DATE OF PUBLICATION : 1972

FIG. 5.06 (b)



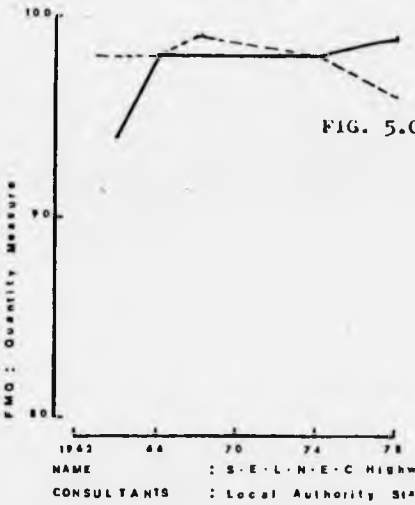
NAME : Merseyside Area L.U.T.S
CONSULTANTS : Traffic Research Corpn. Ltd

FIG. 5.06 (d)



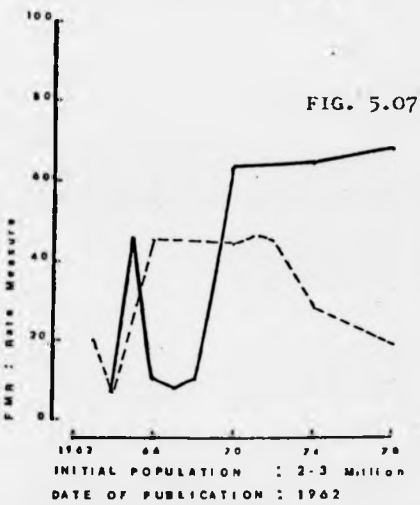
INITIAL POPULATION : 1·4 Million
DATE OF PUBLICATION : 1969

FIG. 5.07 (b)



NAME : S·E·L·N·E·C Highway Plan
CONSULTANTS : Local Authority Staff

FIG. 5.07 (a)



INITIAL POPULATION : 2·3 Million
DATE OF PUBLICATION : 1962

IMPLEMENTATION RATIOS FOR THREE METROPOLITAN STUDIES

5.3 SELECTION OF STUDIES FOR FURTHER ANALYSIS

For further analysis, I had to restrict my sample to those plans published by county borough councils in England prior to 1972. In other words considering Great Britain as a whole, I have excluded plans relating to counties, non-county borough, urban and rural districts, London, Scotland and Wales and generally plans published after 1972. The reasons for this are as follows.

5.3.1 Reasons for excluding plans covering county areas

Prior to the local government re-organisation in 1974, county councils and county borough councils were the major local highway authorities. Most urban transport studies were completed by county borough councils singly or in partnership with neighbouring authorities. The resulting (county borough) transport plans contained the whole of the administrative area of the town in one plan thus making it simpler to analyse. Plans by county councils on the other hand are more complicated to analyse because these plans are published in sections covering parts of their administrative areas during different time periods.

For instance, Cheshire County Council published as part of the SELNEC Highway Plan its long-term highway strategy for North-East Cheshire. This plan was published in 1962. But plans for the Wirral Peninsula in Cheshire was covered by the Merseyside Area Landuse Transportation Study, published in 1969[2]. It will be unrealistic to piece together a number of plans published at various times in carrying out implementation analysis for a given administrative area. Furthermore, trunk roads which are essentially determined according to a national strategy, play a prominent role in meeting the local transport requirements in counties.

5.3.2 Reasons for excluding plans published by lower tier authorities

Non-county borough, urban and rural district councils sometimes produced transport plans for their areas to persuade the county councils to implement them. It is unrealistic to relate the success of implementation of these plans with changes in local factors affecting these authorities since these are not the highway authorities responsible for the provision of infrastructure. Also the plans produced by these authorities normally contain only a few distinct schemes and therefore the results are not suitable for division into further analysis.

5.3.3 Reasons for excluding plans published by Greater London Council

The relevant study in this respect is the Greater London Transportation Study. However this study was not published in 1972; the latest time set for inclusion in the sample. The reason for this time limit will be explained later.

Secondly, the responsibility for provision of transport in London is more complex compared with those of the former county borough councils. For instance the British Rail plays an independent but important role in determining the local transport needs in parts of London. It is therefore unrealistic to combine the implementation ratios of former county boroughs with that of London.

Thirdly, the task of calculating implementation ratios for a plan published for London is too formidable for it to be undertaken as part of this research project.

Finally, being the national capital, I suspect that transport decisions in London are not allowed to be determined by local factors to the same extent as those of provincial cities. Therefore the addition of London to the sample is likely to unnecessarily increase the variations in a correlation analysis.

5.3.4 Reasons for excluding plans published by Scottish and Welsh Authorities

Landuse and transport planning functions in Scotland and Wales are undertaken by the respective Secretaries of State for these countries. In England until the early 70s, Central Government decisions relating to the provision of roads were made by the Ministry of Transport while landuse planning functions were undertaken by the Ministry of Housing and Local Government. Therefore if implementation ratios calculated for urban plans in all these three countries are combined, some of the variations in implementation could be attributed to the differences in the central decision-making processes. My analysis would be further complicated as a result. Partly for the above reason and partly because of the paucity of urban transport studies published in Scotland and Wales in the pre-reorganisation period, I wished to avoid including Scottish and Welsh plans.

A further reason for excluding Scottish burghs from my analysis is that financial returns of roads works completed in that country are not readily available in a format sufficiently detailed to calculate implementation ratios.[3]

5.3.5 Reasons for excluding plans published after 1972

In the last four sub-sections I explained my reasons for excluding plans published by county councils, lower-tier authorities, London, Scotland and Wales from further analysis. This has resulted in my analysis being restricted to plans published by former county borough councils in England. However these county boroughs were abolished in 1974 and most of their transport planning functions transferred to the new county councils.

Therefore, I have restricted the analysis of implementation ratios to the period up to 1974. Normally, completion of projects contained in a plan would take about two years from the date of commencement of construction. Therefore, I have decided to exclude county borough plans published after 1972 from implementation analysis.

5.4 FURTHER ANALYSIS OF COUNTY BOROUGH PLANS

In chapter three, several key factors affecting the implementation of transport plans were identified. In § 5.2, it was shown that non-trunk road schemes published in urban transport studies were poorly implemented (low FMR) but were not effectively superceded (high FMR). Implementation analysis is a powerful tool for isolating and weighting the influence of the various factors on the implementation of transport plans. In the next nine chapters, I will use implementation analysis to explain the influence of the various individual factors in bringing about low rate measure of implementation of transport plans for county boroughs.

Fig. 5.08 (table) gives cumulative rate measures of implementation up to 1974 (FMR_{1974}) for 23 county borough transport plans which are contained in the transportation studies given in Fig. 5.4 (table).

The Tyne Wear Plan contains the recommendations for the county boroughs of Newcastle upon Tyne, Sunderland, Tynemouth and Gateshead.[3] The Merseyside Area Landuse - Transportation Study (MALTS) contains the plans for Liverpool, Bootle, Birkenhead and Wallasey. The South East Lancashire North East Cheshire (SELNEC) Highway Plan contains the plans for the county boroughs of Manchester, Oldham, Bolton, Salford, Rochdale and Bury.[4] Middlesborough is a single county borough contained in the Teeside Survey and Plan. The administrative area of Middlesborough was extended in 1968 to include

FIG. 5.08 (TABLE)

CUMULATIVE RATE MEASURES OF IMPLEMENTATION
UPTO 1974 (FMR_{1974}) FOR 23 COUNTY BOROUGH TRANSPORT PLANS

	TOWN	FMR_{1974}
	SELNEC HIGHWAY PLAN	
1.	MANCHESTER	0.30
2.	BOLTON	0.69
3.	BURY	0.38
4.	SALFORD	0.22
5.	OLDHAM	0.48
6.	ROCHDALE	0.51
	MALTS LUTS	
7.	LIVERPOOL	0.69
8.	BIRKENHEAD	0.66
9.	BOOTLE	0.30
10.	WALLASEY	0.51
	TYNE WEAR PLAN	
11.	NEWCASTLE	0.22
12.	SUNDERLAND	0.19
13.	TYNEMOUTH	0.37
14.	GATESHEAD	0.24
	FREE-STANDING TOWN STUDIES	
15.	ST. HELENS	0.63
16.	SOUTHAMPTON	0.35
17.	BATH	0.00
18.	LEICESTER	0.08
19.	COVENTRY	0.32
20.	PORTSMOUTH	0.50
21.	MIDDLESBOROUGH	0.22
22.	NOTTINGHAM	0.05
23.	OXFORD	0.00

the neighbouring urban areas thus creating the Teeside County Borough. For the purposes of calculating the implementation ratios, the status quo is maintained by considering only those schemes that were contained in the former county borough area. However the socio-political changes associated with this minor re-organisation in Teeside is included in subsequent analysis. For instance, consideration has been given to the change in party-political control of the local council that have resulted from this re-organisation. FMR_{1974} for 8 other free-standing town studies are also included in the list to complete a sample of 23 county borough plans for further analysis.

These values of FMR would not have been significantly different had an earlier date for instance 1972, been chosen as the cut-off year. Statistical tests comparing the differences in FMR_{1970} FMR_{1972} and FMR_{1974} were completed for this purpose. The statistical test given in page 11.12 of this thesis is of a similar nature and gives further evidence. In that page, it is shown that the difference of means of FMR_{1972} and FMR_{1974} is not significant at the 5 per cent level considering a sample of 14 studies.

5.5 CONCLUSION

In Chapter Three, several key factors affecting the implementation of transport plans were identified. Implementation analysis is a powerful tool for isolating and weighting these factors. In the next nine chapters, I will isolate the effect of various factors on the implementation of county borough transport plans.

5.6 NOTES

1. The data for the calculation of FMQ and FMR are based on several publications, personal contacts, site visits and Ordnance Survey and other maps. The most important publications are:

   (a) MINISTRY OF TRANSPORT: Roads in England - 1962 to 1977 HMSO London. Published annually, these publications give progress reports and costs of all major highway schemes in England. Between 1975 and 1977 details were given only for trunk roads and since then the series has been replaced by the annual publication Policy for Roads, the first of which is - Policy for Roads: England 1978 (CMND 7132), HMSO, London.

   (b) Various County Councils in England: Transport Policies and Programme - 1975 to 1978. These annual publications give a five-year rolling transport programme normally and estimates of expenditures for proposed and recently completed county schemes within their administrative areas.

   (c) Transportation studies as described in Table II.

2. Traffic Research Corporation Ltd (1969) MERSEYSIDE AREA LANDUSE TRANSPORTATION STUDY
   Liverpool, 11 Rumford Street

3. "SCOTTISH ROADS" annually published by the Secretary of State for Scotland only provides information on lengths of road completed and not highway expenditure.

S.E.L.N.E.C. HIGHWAY PLAN

CALCULATION OF IMPLEMENTATION RATIOS

FIGURE 5.04 (TABLE)

NOTE: PLANS FOR THESE PROPOSALS ARE GIVEN AT THE END OF FIGURE 5.04(TABLE)

S.E.L.N.E.C. HIGHWAY PROPOSALS

PROGRAMME
FOR FIRST 10 YEARS 1963 - 1972

Schedule A — Trunk Roads

Schedule B — Classified Roads

Schedule C — Town Centre Development Plan

SCHEDULE A.

Trunk Road Programme

Scheme No.	Scheme	TOTAL COST £M	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
101	A56. Improvement, Derbyshire La. to Talbot Rd.	0.240	0.010	0.230								
101A	A56. Longford Bridge to Edge Lane	0.530						0.300	0.230			
102	A56. Improvement of Chester Rd. at Edge La (2nd Stage)	0.260						0.260				
103	A57. Godley Arches to junction with A560	0.775		0.550	0.225							
104	A57. Improvement, M/C boundary to Denton, O.R.R.	0.300		0.150	0.150							
105	A57. Hyde By-pass	1.300			0.450	0.850						
106	Cheshire East - West Motorway	3.500				1.000	1.500	1.000				
106	Princess Pkwy. M'way, Altrincham Rd. to Ches.bdy.	1.500					0.550	0.950				
107	A56. Impt. of Chester Rd. Market St-Barton Rd.	0.300						0.300				
108	A560. Sharston By-pass Stage I Stage II	1.200 0.500				0.600	0.600				0.500	
611	Sharston By-pass & Altrincham Rd. Impt. from Princess Pkway. eastwards to Cheshire bdy.	0.850				0.425	0.425					
111	A6. Stockport bdy. to junction with A523.	0.800										0.400
112	A57. Impt. & diversion (Denton Internal Relief Road), Outer Ring Road to Cheshire boundary	2.430									0.830	0.700
115	A56. Flyover at junc. with A5063 (White City)	1.650				0.825	0.825					
116	A56. Impt. from L/Y M'way. to A665, Whitefield	0.140								1.140		
117	A6, A580. Flyover at junc. with A6 & A666 Swinton	1.000				0.500	0.500					
802	Irwell Valley Motorway	8.000							2.000	2.000	2.000	2.000
118	I.V.M'way, Salford bdy. to jnc. with L/Y M'way	3.500						1.300	1.100	1.100		

SCHEDULE A.

Trunk Road Programme

Scheme No.	Scheme	TOTAL COST £M	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
101	A56. Improvement, Derbyshire La. to Talbot Rd.	0.240	0.010	0.230								
101A	A56. Longford Bridge to Edge Lane	0.530						0.300	0.230			
102	A56. Improvement of Chester Rd. at Edge La (2nd Stage)	0.260						0.260				
103	A57. Godley Arches to junction with A560	0.775		0.550	0.225							
104	A57. Improvement, M/C boundary to Denton, O.R.R.	0.300		0.150	0.150							
105	A57. Hyde By-pass	1.300			0.450	0.850						
106	Cheshire East - West Motorway	3.500				1.000	1.500	1.000				
106	Princess Pkwy. M'way, Altrincham Rd. to Ches.bdy.	1.500					0.550	0.950				
107	A56. Impt. of Chester Rd. Market St-Barton Rd.	0.300						0.300				
108	A560. Sharston By-pass Stage I Stage II	1.200 0.500				0.600	0.600				0.500	
611	Sharston By-pass & Altrincham Rd. Impt. from Princess Pkway. eastwards to Cheshire bdy.	0.850				0.425	0.425					
111	A6. Stockport bdy. to junction with A523.	0.800										0.400
112	A57. Impt. & diversion (Denton Internal Relief Road), Outer Ring Road to Cheshire boundary	2.430									0.830	0.700
115	A56. Flyover at junc. with A5063 (White City)	1.650				0.825	0.825					
116	A56. Impt. from L/Y M'way. to A665, Whitefield	0.140								1.140		
117	A6, A580. Flyover at junc. with A6 & A666 Swinton	1.000				0.500	0.500					
802	Irwell Valley Motorway	8.000							2.000	2.000	2.000	2.000
118	I.V.M'way, Salford bdy. to jnc. with L/Y M'way	3.500						1.300	1.100	1.100		

SCHEDULE A. (CONTINUED)

Scheme No.	Scheme	TOTAL COST £M	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
121	A56. Diversion. Bury Easterly By-pass (L/Y Motroway to Ramsbottom) (part)	4.480								0.860	0.770	0.870
126	A6. Junction with A523 to the Outer Ring Road	0.200)										
127	A6. Outer Ring Road to Marple U.D. boundary	0.260)										0.460
	TOTALS £M		0.010	0.930	0.825	4.200	4.400	4.110	3.330	4.100	4.100	4.430

SUMMARY

Total Cost of Trunk Road Schemes in Highway Plan	£57.815M.
Total Expenditure 1963 - 1972	£30.435M.
Balance after 1972	£27.380M.

Schemes not included in Programme

132	New Route. L/Y Motorway, A580. to Milnrow boundary	14.000					14.000					
109	A6. Diversion & M/c Preston M'way from A580/ L/Y M'way to junc. with A6 at Middle Hulton	4.000				1.500	1.500	1.000				
125	A6. Diversion, Extra lanes on M/c Preston M'way from junc. with Farnworth Link to junc. with L/Y Motorway.	0.500						0.500				

SCHEDULE B.

CLASSIFIED ROADS

AUTHORITY	Scheme No.	DESCRIPTION	TOTAL COST £M	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
BOLTON	301	A6057 Trinity Street Bridge	0.265	0.265									
	302	A666 Inner Relief Road - Eastern	2.096			1.000	1.096						
	303	A6056 Inner Relief Road (Part)	1.139				0.190						
	304	A579 Great Moor Street	0.180						0.180				
	306	A666 Manchester Road widening	0.380					0.190			0.190		
	307	A666 Manchester Road widening	0.130					0.130					
	212	Farnworth & Kearsley By-pass	0.700		0.500	0.200							
BURY	352	Internal Relief Road - Bury Bridge to Walmersley Road	0.600		0.600								
	353	Internal Relief Road - to Knowsley Street	0.500					0.500					
	354	Internal Relief Road to Rochdale Road	0.200							0.200			
	356	Crostons Rd. & Bury Bridge widening	0.110				0.110						
	359	Market Street Extension	0.280									0.140	0.140
CHESHIRE	204	Sale Eastern By-pass	1.250				0.500	0.500	0.250				
	209	Hardy Lane Extension	0.200					0.200					
	401	Altrincham Level Crossing	0.400	0.400									
	402	A34 Griffin Farm - Kingsway, Cheadle	0.400				0.200	0.200					
	403	A34 Wilmslow By-pass	0.800			0.400	0.400						
	407	A6018 Stalybridge	0.660						0.330	0.330			
	408	A635 County boundary to A6018	0.300							0.300			
	410	Harboro Rd. & Carrington Lane, Sale	0.300									0.300	
	411	Marsland Rd. & Old Hall Rd., Sale	0.350					0.350					

SCHEDULE B.

CLASSIFIED ROADS

AUTHORITY	Scheme No.	DESCRIPTION	TOTAL COST £M	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
BOLTON	301	A6057 Trinity Street Bridge	0.265	0.265									
	302	A666 Inner Relief Road - Eastern	2.096			1.000	1.096						
	303	A6056 Inner Relief Road (Part)	1.139				0.190						
	304	A579 Great Moor Street	0.180						0.180				
	306	A666 Manchester Road widening	0.380					0.190			0.190		
	307	A666 Manchester Road widening	0.130					0.130					
	212	Farnworth & Kearsley By-pass	0.700		0.500	0.200							
BURY	352	Internal Relief Road - Bury Bridge to Walmersley Road	0.600		0.600								
	353	Internal Relief Road - to Knowsley Street	0.500					0.500					
	354	Internal Relief Road to Rochdale Road	0.200							0.200			
	356	Crostons Rd. & Bury Bridge widening	0.110				0.110						
	359	Market Street Extension	0.280									0.140	0.140
CHESHIRE	204	Sale Eastern By-pass	1.250				0.500	0.500	0.250				
	209	Hardy Lane Extension	0.200					0.200					
	401	Altrincham Level Crossing	0.400	0.400									
	402	A34 Griffin Farm - Kingsway, Cheadle	0.400				0.200	0.200					
	403	A34 Wilmslow By-pass	0.800			0.400	0.400						
	407	A6018 Stalybridge	0.660						0.330	0.330			
	408	A635 County boundary to A6018	0.300							0.300			
	410	Harboro Rd. & Carrington Lane, Sale	0.300									0.300	
	411	Marsland Rd. & Old Hall Rd., Sale	0.350					0.350					

AUTHORITY	Scheme No.	DESCRIPTION	TOTAL COST £M	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
MANCHESTER	203	Outer Ring Road - Southern Section	1.500						0.200				
	207	Inner Ring Road (Part)	12.450							1.500	1.500	1.500	1.900
	209	Hardy Lane Extension	0.180					0.180					
	210	A.6 Improvement (Part)	3.245								0.800	0.750	0.750
	601	Altrincham Road Improvement	0.110	0.110									
	602	Upper Brook Street Improvement	0.500		0.250	0.250							
	603	Link Road 17/7	4.980	2.000	2.000	0.980							
	604	Princess Rd. - Denmark Rd. to 17/7	0.500				0.500						
	606	Princess Rd. Improvement to Altrincham Road	2.630		0.600	0.600		0.430	0.500	0.500			
	607	Princess Rd. Extn. - 17/7 to C.C. Road	0.183				0.183						
	609	Cambridge St. Extn. from Chepstow St.	0.400				0.400						
	612	A56 Chester Road Improvement (Part)	2.150										1.150
	613	Princess Rd. Improvement. M'way scheme (Part)	4.687					0.500	0.500	1.000			
	614	Styal Road Diversion	0.167			0.167							
	615	City Centre Road (Part)	10.000							1.000		1.000	1.000
	620	Intermediate Ring Road (Part) North Road to Stockport Road	0.880									0.100	
	622	A57 Hyde Road Widening (Part)	1.930				0.250						
	623	Chorlton Road Extension	0.250				0.250						
	624	Oldham Road - C.C. Rd. to Inner Ring Rd.	0.535								0.535		
	625	Oldham Road - Inner Ring Rd. to Butler St.	0.725								0.400	0.325	
OLDHAM	205	Brodway Extension	0.089							0.089			
	701	Southern Internal By-pass	2.160	0.500	0.500	1.160							

AUTHORITY	Scheme No.	DESCRIPTION	TOTAL COST £M	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
MANCHESTER	203	Outer Ring Road - Southern Section	1.500						0.200				
	207	Inner Ring Road (Part)	12.450							1.500	1.500	1.500	1.900
	209	Hardy Lane Extension	0.180					0.180					
	210	A.6 Improvement (Part)	3.245								0.800	0.750	0.750
	601	Altrincham Road Improvement	0.110	0.110									
	602	Upper Brook Street Improvement	0.500		0.250	0.250							
	603	Link Road 17/7	4.980	2.000	2.000	0.980							
	604	Princess Rd. - Denmark Rd. to 17/7	0.500				0.500						
	606	Princess Rd. Improvement to Altrincham Road	2.630		0.600	0.600		0.430	0.500	0.500			
	607	Princess Rd. Extn. - 17/7 to C.C. Road	0.183				0.183						
	609	Cambridge St. Extn. from Chepstow St.	0.400				0.400						
	612	A56 Chester Road Improvement (Part)	2.150										1.150
	613	Princess Rd. Improvement. M'way scheme (Part)	4.687					0.500	0.500	1.000			
	614	Styal Road Diversion	0.167			0.167							
	615	City Centre Road (Part)	10.000							1.000		1.000	1.000
	620	Intermediate Ring Road (Part) North Road to Stockport Road	0.880									0.100	
	622	A57 Hyde Road Widening (Part)	1.930				0.250						
	623	Chorlton Road Extension	0.250				0.250						
	624	Oldham Road - C.C. Rd. to Inner Ring Rd.	0.535								0.535		
	625	Oldham Road - Inner Ring Rd. to Butler St.	0.725								0.400	0.325	
OLDHAM	205	Brodway Extension	0.089							0.089			
	701	Southern Internal By-pass	2.160	0.500	0.500	1.160							

AUTHORITY	Scheme No.	DESCRIPTION	TOTAL COST £M	1963	1964	1965	1966	1967	1967	1969	1970	1971	1972
	702	A62 Bottom o'th'Moor Improvement	0.185			0.185							
	707	Extension of Southern Internal By-pass	1.400						0.700	0.700			
ROCHDALE	205	Broadway Extension	1.000						0.500	0.500			
	751	Inner Relief Road (Part))	3.100	0.600									
	751	Motorway Link Road (Part))			0.800	0.800			0.500	0.300			
	752	Edenfield Road	0.275			0.275							
SALFORD	207	The Inner Ring Road (Part)	5.600								1.200	1.200	1.200
	803	Bolton Road Improvement	0.700					0.700					
	804	Broad Street Improvement	1.536	0.536	1.000								
	805	A6 Improvement - Cross Lane to New Bailey Street	0.567								0.576		
	806	New Bailey Street Extension	0.128									0.128	
	807	A5063 Improvement - Trafford Road to Broad Street	1.080					0.500	0.580				
STOCKPORT	210	A6 Improvement (Part)	4.100								1.000	1.000	1.000
		UNDER £100,000 SCHEMES	5.000	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500
		TOTALS £M		5.411	7.800	8.142	7.864	9.720	10.095	9.878	8.231	7.668	7.950

CLASSIFIED ROADS - TOTAL EXPENDITURE 1963 - 1972 = £82.759M.

SCHEDULE C.

Additional Programme of Schemes necessary for Town Centre Development

AUTHORITY	Scheme No.	DESCRIPTION	TOTAL COST £M	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
BURY	351	New Route-Rochdale Road to Knowsley St.	0.200		0.100	0.100							
CHESHIRE	-	Stalybridge Town Centre	0.200						0.100	0.100			
LANCASHIRE	525	A.668 Diversion, Radcliffe	1.014								0.500	0.514	
MANCHESTER	615	City Centre Road (Part)	7.000 (Balance)							1.000	2.000	2.000	2.000
OLDHAM	-	Town Centre Area	0.341						0.341				
	715	A.62 Manchester St. Widening	0.100						0.100				
ROCHDALE	753	Town Centre Relief Road (Part))	0.700				0.300	0.400					
	754	Whitworth Road Diversion (Part))											
STOCKPORT	852	A.626 Market Area By-pass	0.800				0.400	0.400					
TOTALS £M				-	0.100	0.100	0.700	0.800	0.541	1.100	2.500	2.514	2.000

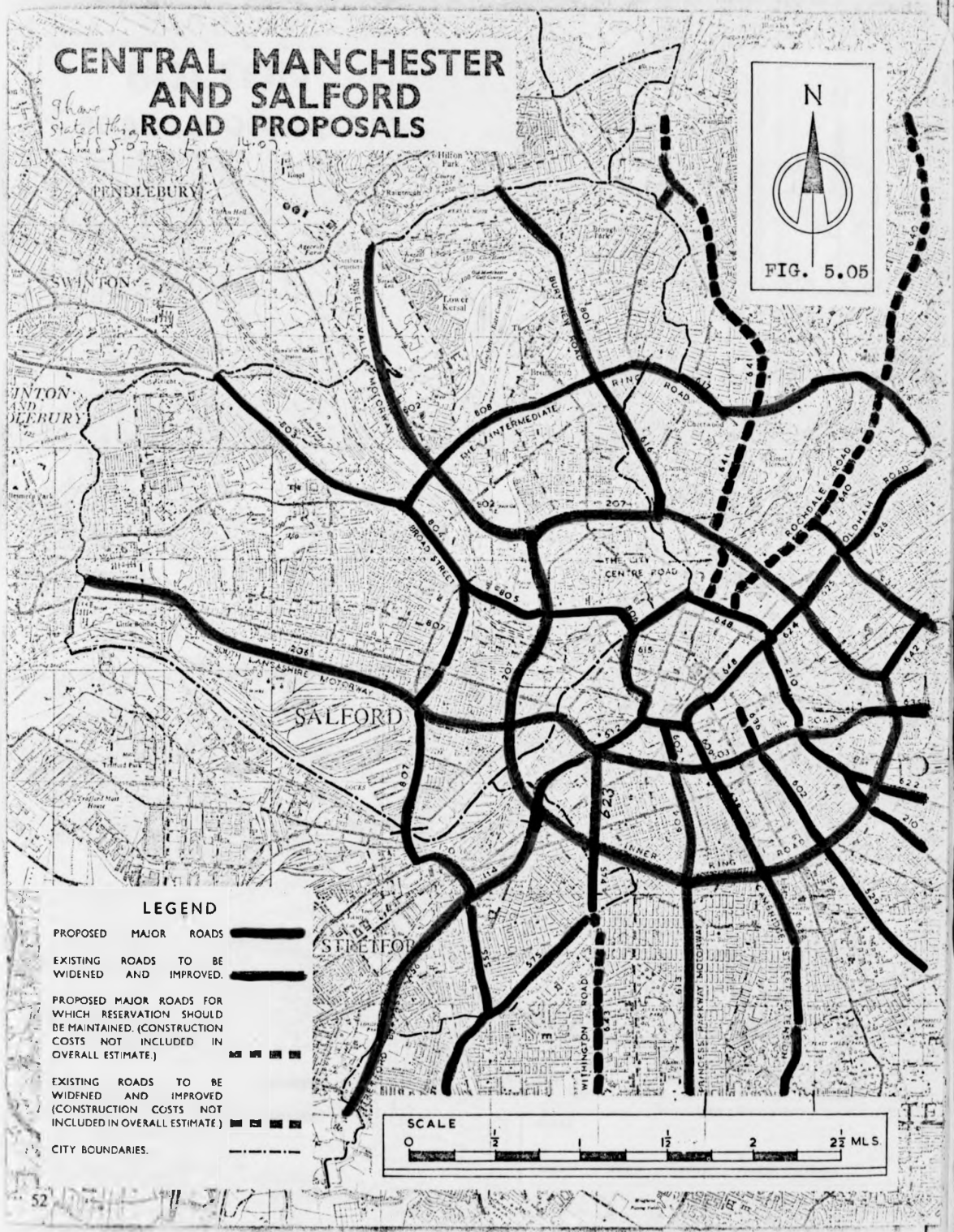
Town Centre Schemes - Total Expenditure 1964 - 1972 = £10.355M.

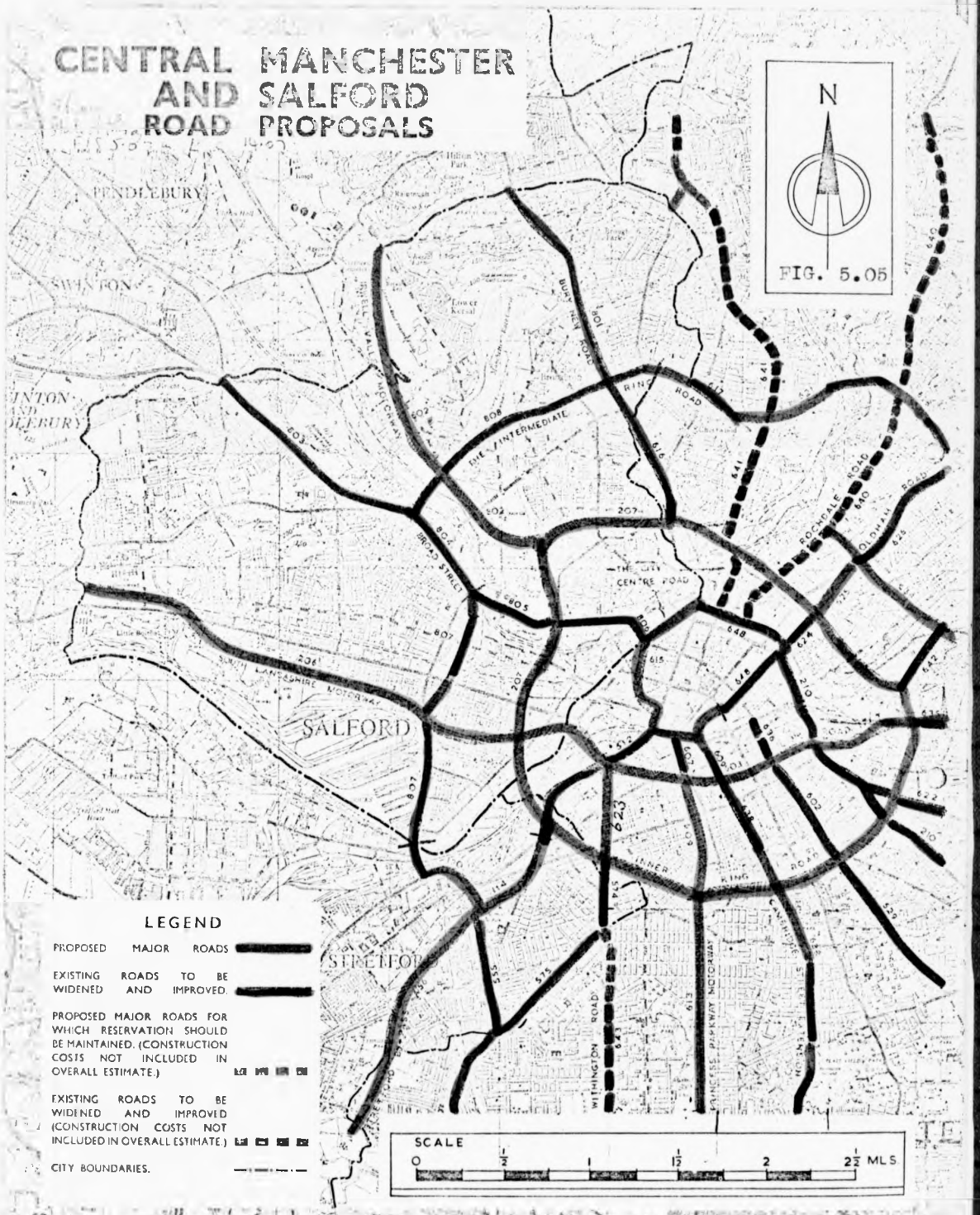
SUMMARY

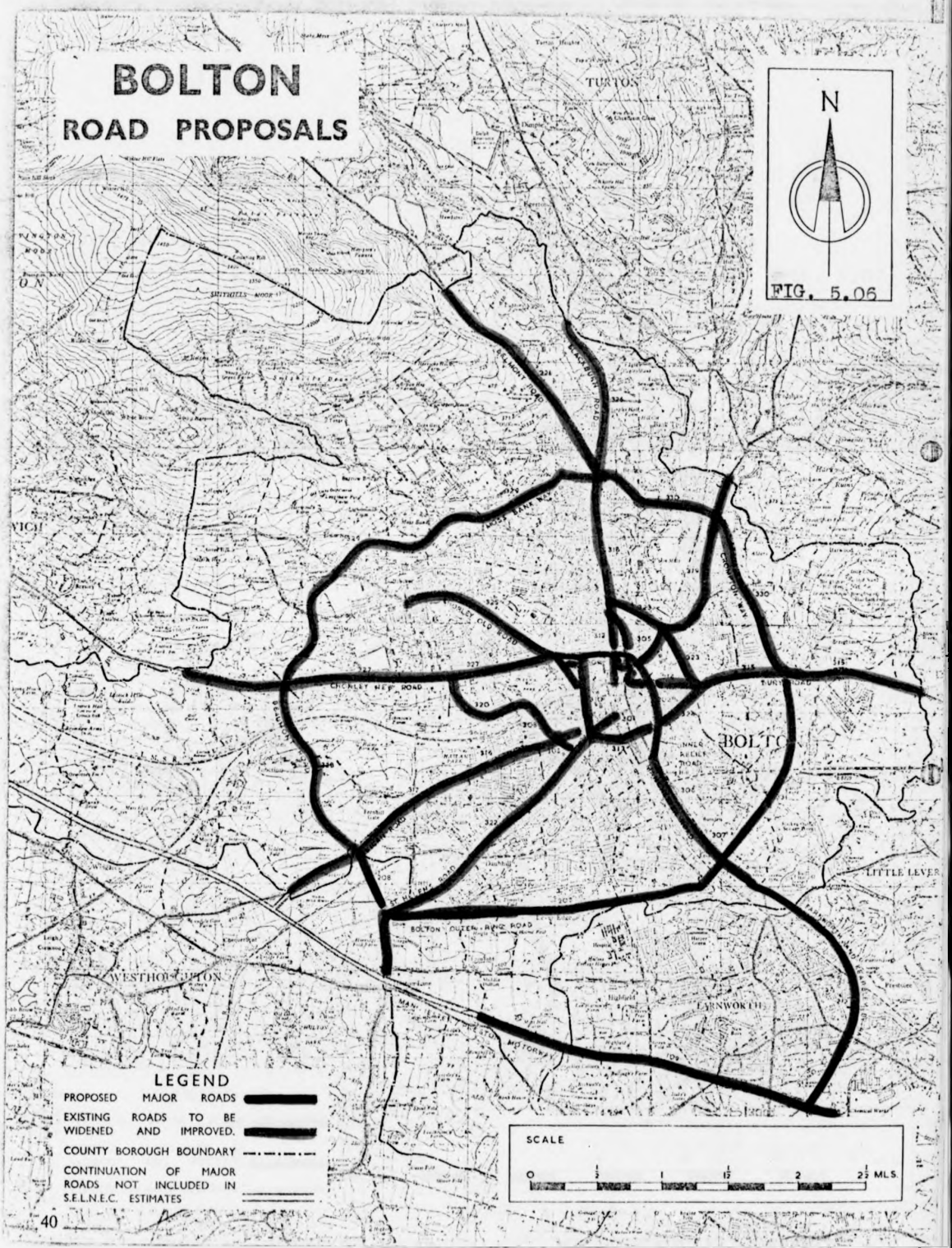
Total Expenditure 1963 - 1972 [(B) + (C)] = £93.114M.

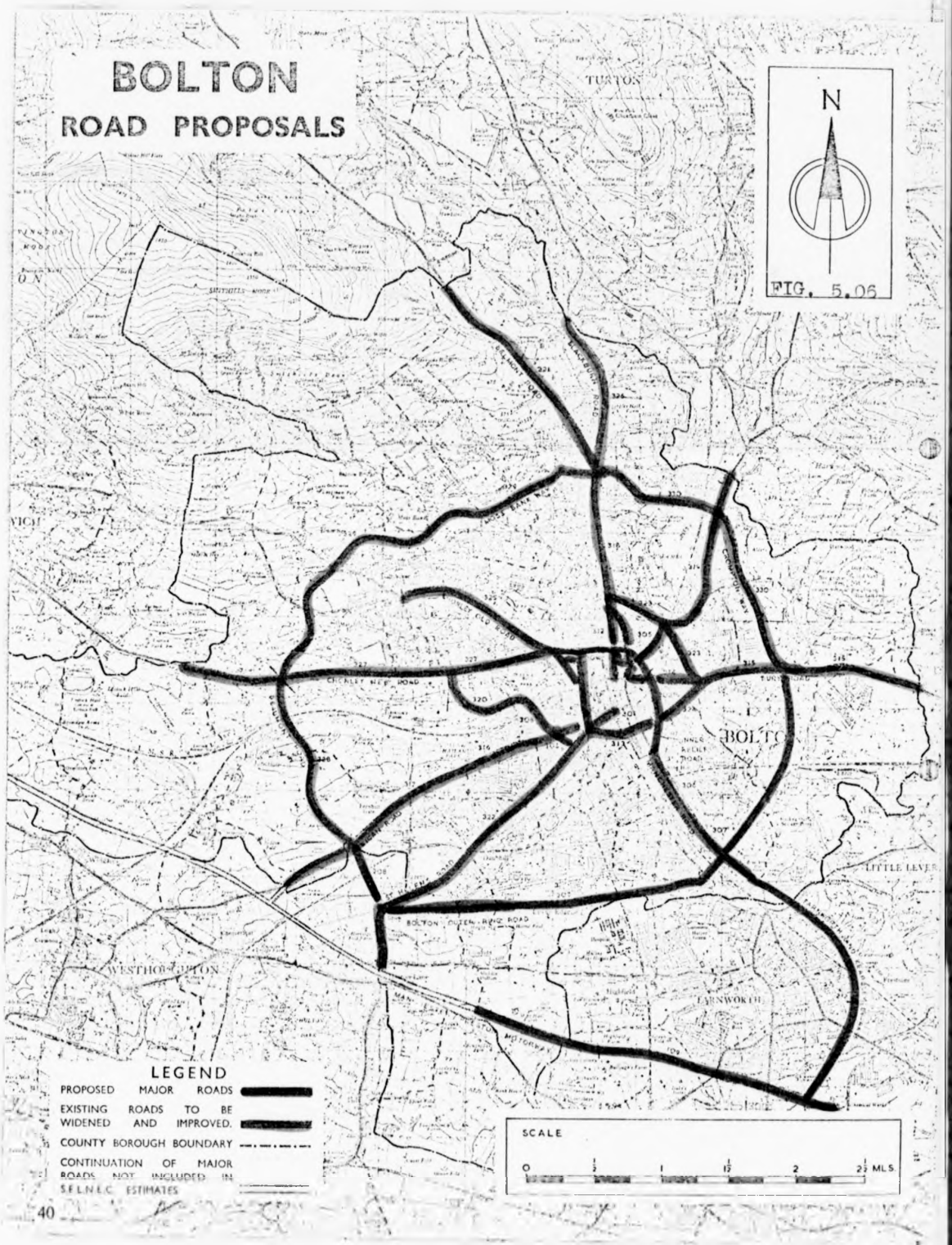
Total Cost of Classified Road Programme = £242.185M.

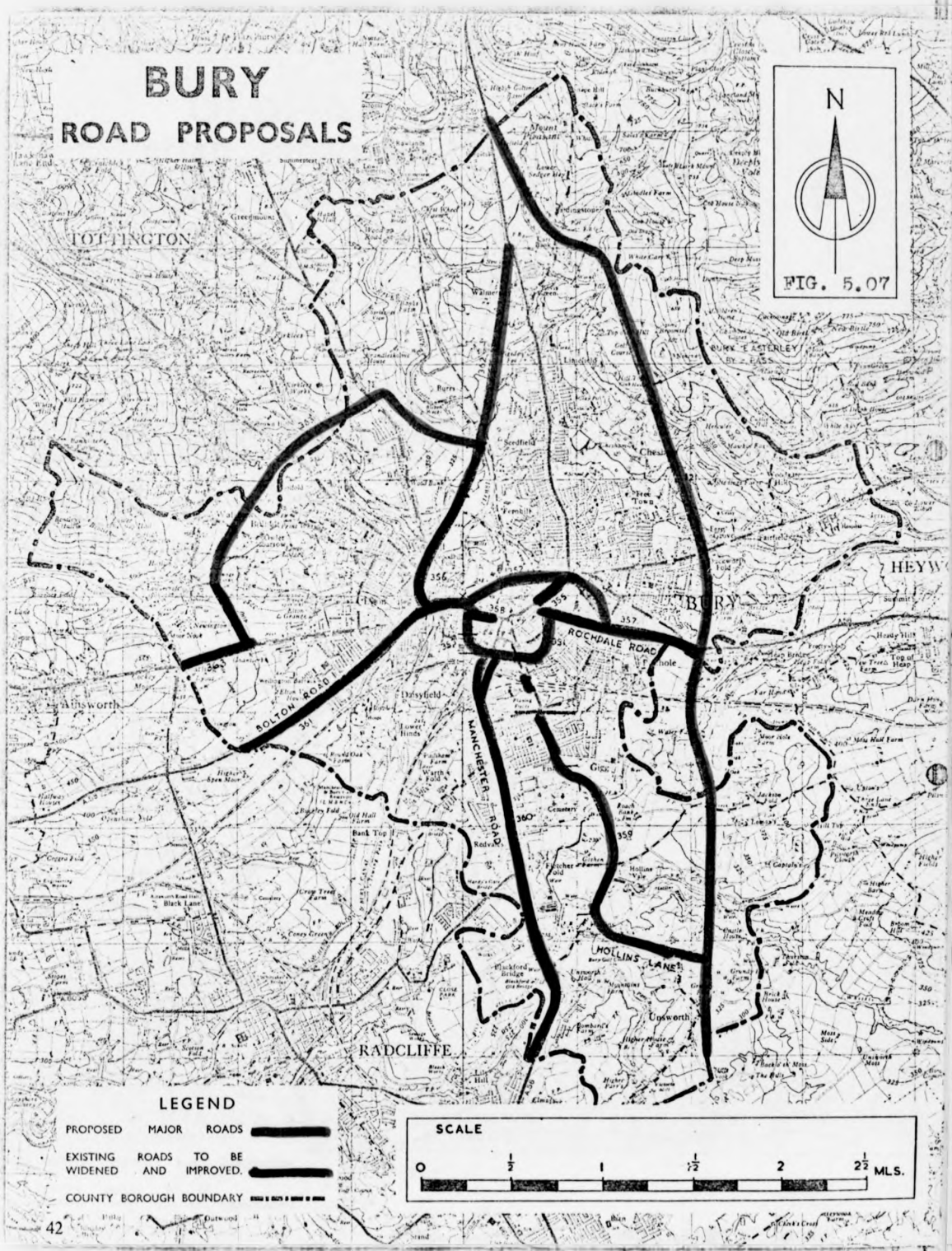
Balance to be done after 1972 = £149.071M.

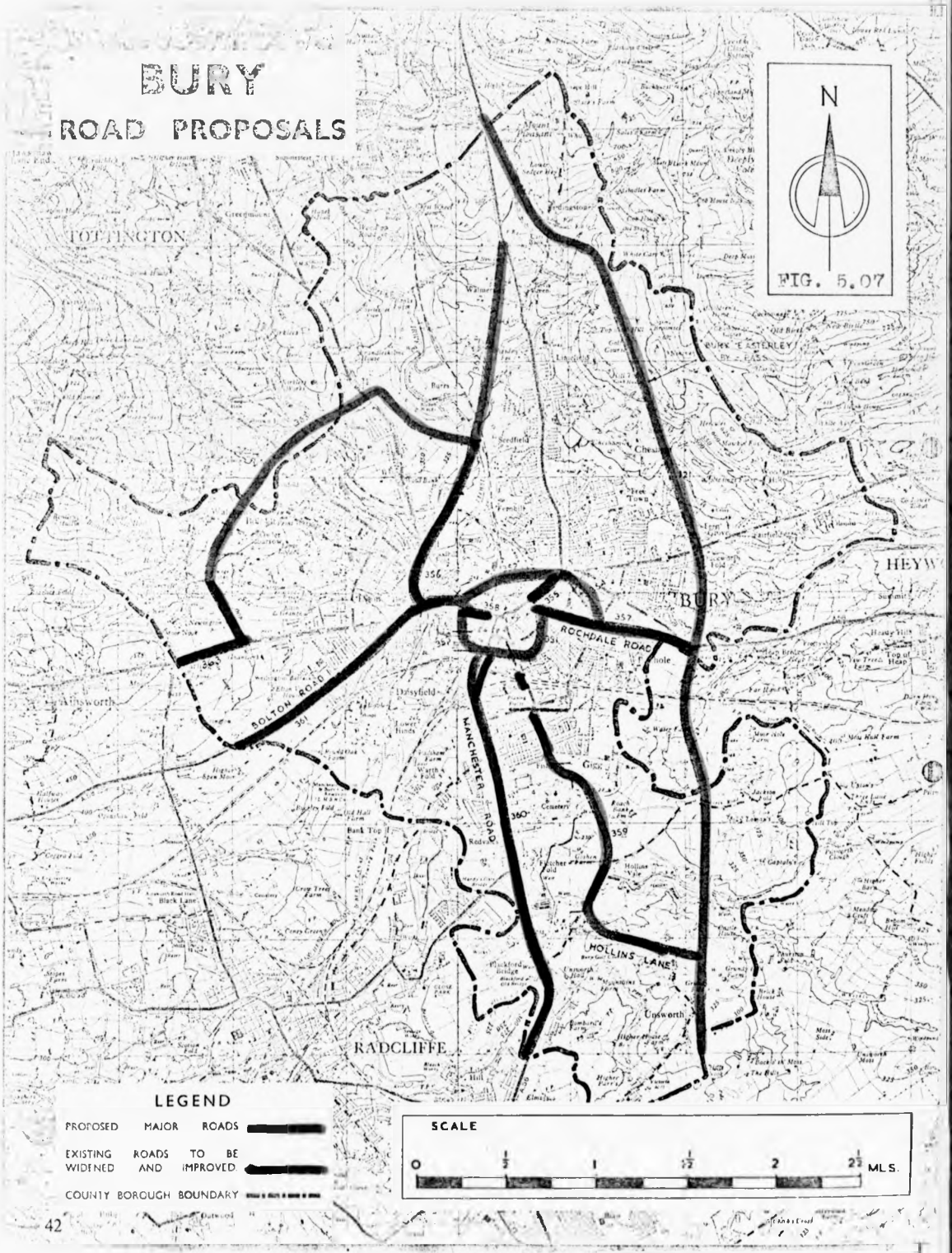

CENTRAL MANCHESTER AND SALFORD ROAD PROPOSALS
N
FIG. 5.05
PENDLEBURY
SWINTON
SALFORD
STRETFORD
BURY NEW ROAD
RING ROAD
THE INTERMEDIATE
BROAD STREET
THE CITY CENTRE ROAD
ROCHDALE ROAD
OLDHAM ROAD
INNER RING ROAD
WITHINGTON ROAD
SOUTH LANCASHIRE MOTORWAY
PRINCESS PARKWAY MOTORWAY
LEGEND
PROPOSED MAJOR ROADS
EXISTING ROADS TO BE WIDENED AND IMPROVED.
PROPOSED MAJOR ROADS FOR WHICH RESERVATION SHOULD BE MAINTAINED. (CONSTRUCTION COSTS NOT INCLUDED IN OVERALL ESTIMATE.)
EXISTING ROADS TO BE WIDENED AND IMPROVED (CONSTRUCTION COSTS NOT INCLUDED IN OVERALL ESTIMATE.)
CITY BOUNDARIES.
SCALE
0 1/2 1 1 1/2 2 2 1/2 MLS.

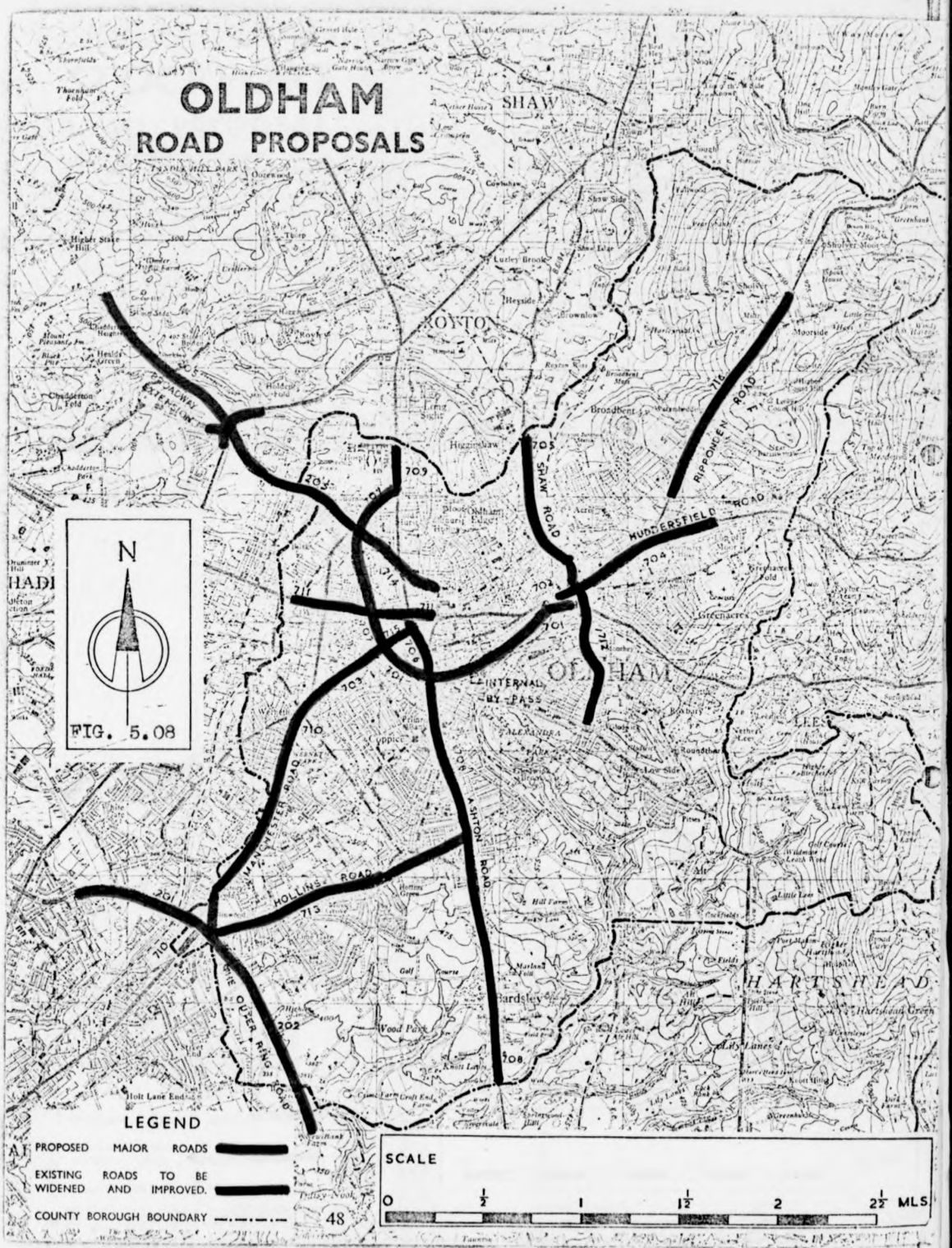

CENTRAL MANCHESTER AND SALFORD ROAD PROPOSALS
N
FIG. 5.05
PENDLEBURY
SWINTON
SALFORD
THE INTERMEDIATE
THE CENTRE ROAD
BROAD STREET
BURY NEW ROAD
ROCHDALE ROAD
OLDHAM ROAD
RING ROAD
WITHINGTON ROAD
PRINCESS PARKWAY MOTORWAY
LEGEND
PROPOSED MAJOR ROADS
EXISTING ROADS TO BE WIDENED AND IMPROVED.
PROPOSED MAJOR ROADS FOR WHICH RESERVATION SHOULD BE MAINTAINED. (CONSTRUCTION COSTS NOT INCLUDED IN OVERALL ESTIMATE.)
EXISTING ROADS TO BE WIDENED AND IMPROVED (CONSTRUCTION COSTS NOT INCLUDED IN OVERALL ESTIMATE.)
CITY BOUNDARIES.
SCALE
0 1/2 1 1 1/2 2 2 1/2 MLS

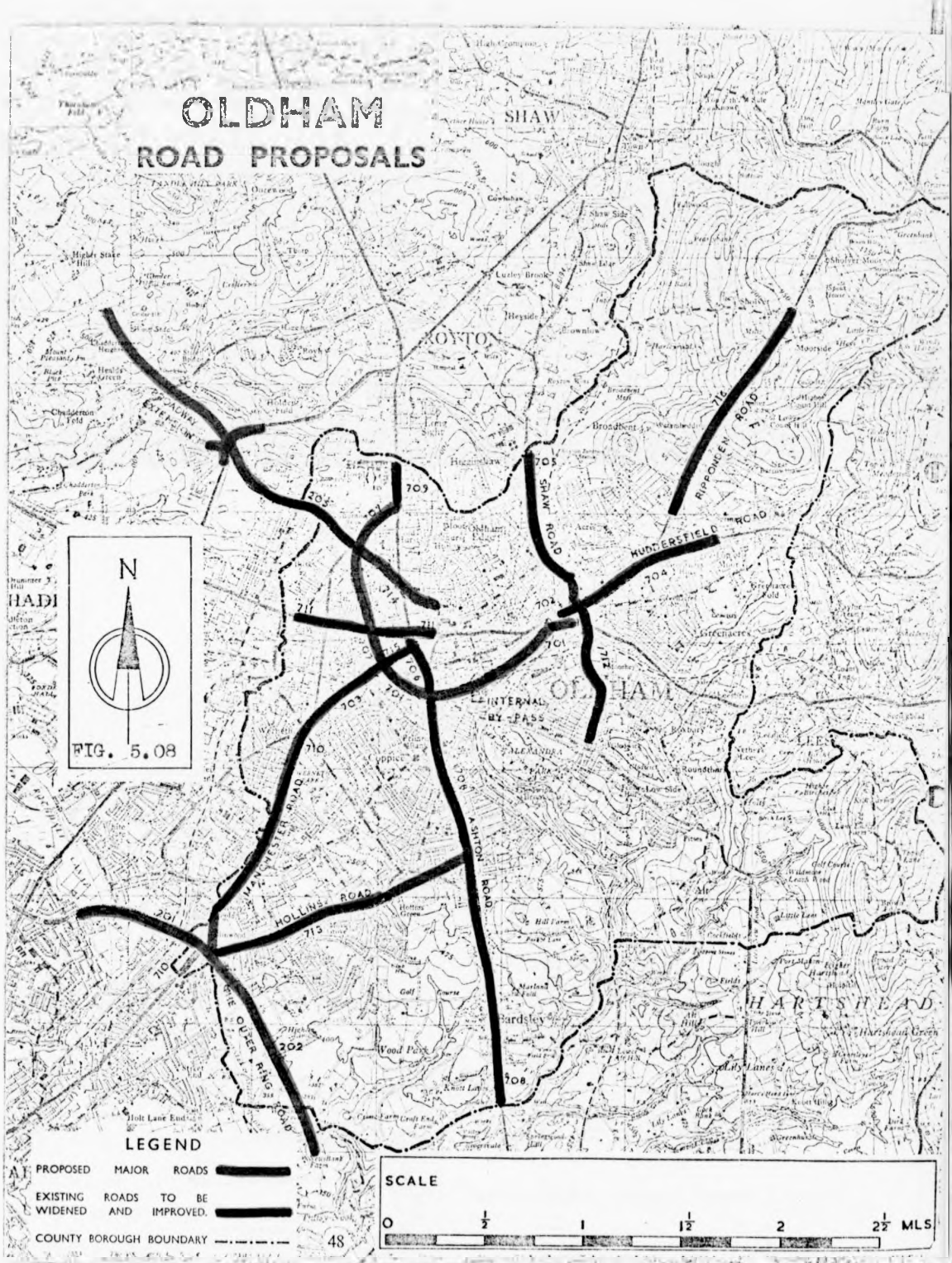

BOLTON
ROAD PROPOSALS
N
FIG. 5.06
TURTON
CROMPTON WAY
CHORLEY NEW ROAD
BOLTON OUTER RING ROAD
LITTLE LEVER
LEGEND
PROPOSED MAJOR ROADS
EXISTING ROADS TO BE WIDENED AND IMPROVED.
COUNTY BOROUGH BOUNDARY
CONTINUATION OF MAJOR ROADS NOT INCLUDED IN S.E.L.N.E.C. ESTIMATES
SCALE
0 ½ 1 1½ 2 2½ MLS.

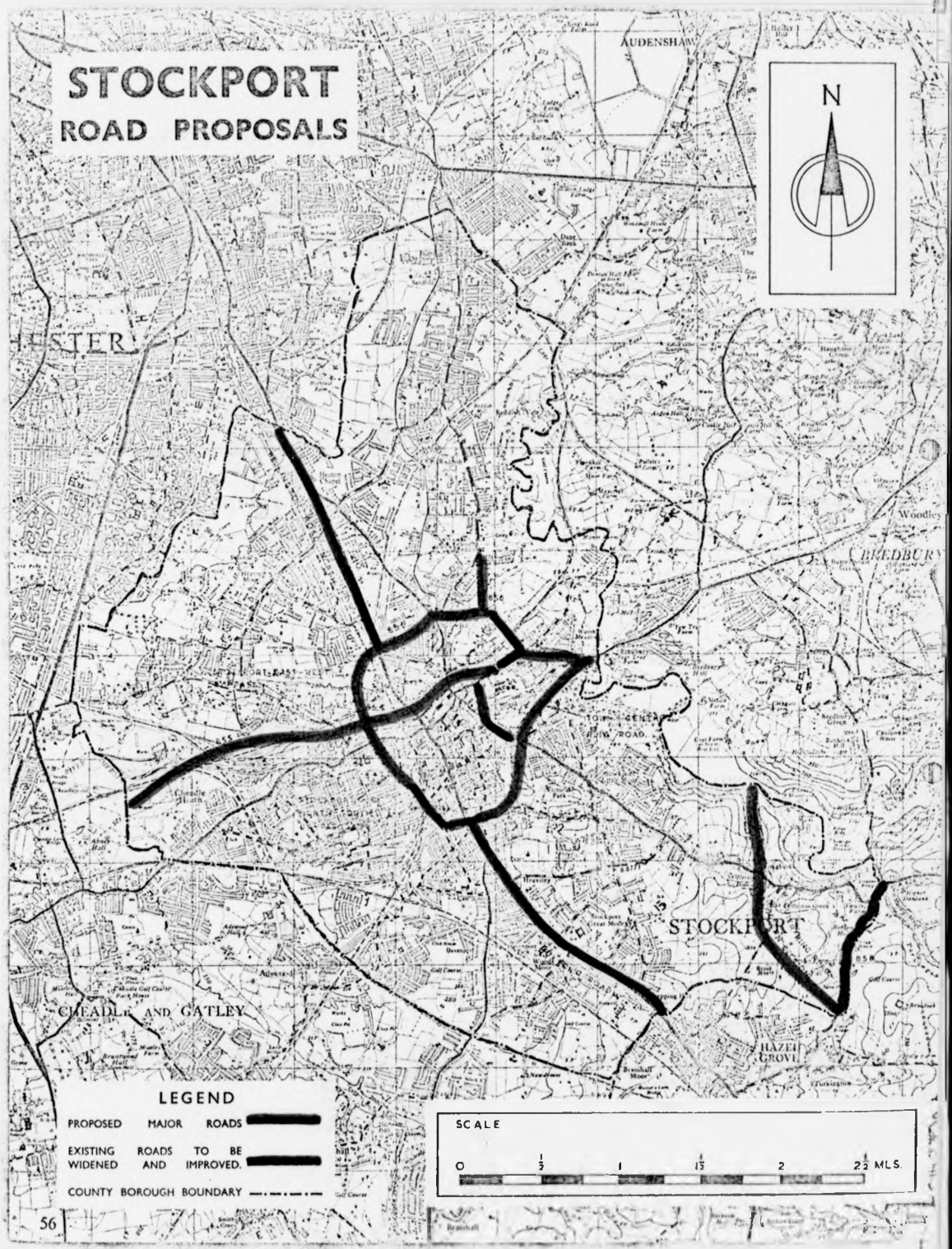

BOLTON
ROAD PROPOSALS
N
FIG. 5.06
TURTON
BOLTON
WESTHOUGHTON
LITTLE LEVER
FARNWORTH
BOLTON OUTER RING ROAD
CHORLEY NEW ROAD
LEGEND
PROPOSED MAJOR ROADS
EXISTING ROADS TO BE WIDENED AND IMPROVED.
COUNTY BOROUGH BOUNDARY
CONTINUATION OF MAJOR ROADS NOT INCLUDED IN S.E.L.N.E.C. ESTIMATES
SCALE
0
1
1
1½
2
2½ MLS

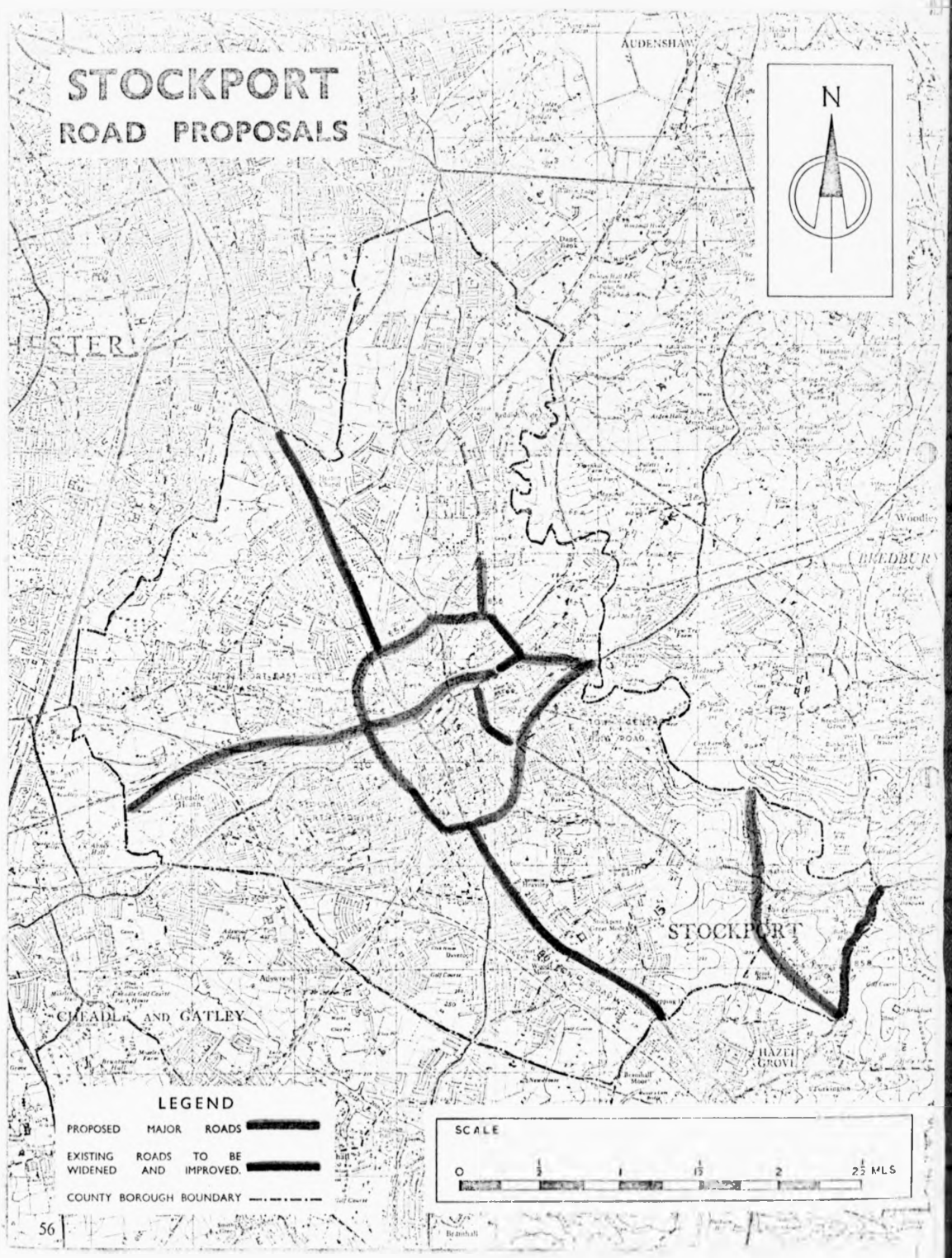

BURY
ROAD PROPOSALS
N
FIG. 5.07
TOTTINGTON
BURY
HEYW
ROCHDALE ROAD
BOLTON ROAD
MANCHESTER ROAD
HOLLINS LANE
RADCLIFFE
Unsworth
Black Lane
Bank Top
Redvales
Gigg
Cemetery
Chesham
Burrs
Walmersley
Tottington
Greenmount
Dunscar
Outwood
LEGEND
PROPOSED MAJOR ROADS
EXISTING ROADS TO BE WIDENED AND IMPROVED.
COUNTY BOROUGH BOUNDARY
SCALE
0 ½ 1 1½ 2 2½ MLS.


BURY
ROAD PROPOSALS
N
FIG. 5.07
TOTTINGTON
BURY
HEYW
ROCHDALE ROAD
BOLTON ROAD
MANCHESTER ROAD
HOLLINS LANE
RADCLIFFE
Unsworth
LEGEND
PROPOSED MAJOR ROADS
EXISTING ROADS TO BE WIDENED AND IMPROVED
COUNTY BOROUGH BOUNDARY
SCALE
0
½
1
1½
2
2½ MLS.


OLDHAM
ROAD PROPOSALS
SHAW
ROYTON
OLDHAM
HARTSHEAD
N
FIG. 5.08
705 - SHAW ROAD
RIPPONDEN ROAD 716
HUDDERSFIELD ROAD 704
INTERNAL BY-PASS
ASHTON ROAD 708
MANCHESTER ROAD 710
HOLLINS ROAD 713
THE OUTER RING ROAD 202
709
LEGEND
PROPOSED MAJOR ROADS
EXISTING ROADS TO BE WIDENED AND IMPROVED.
COUNTY BOROUGH BOUNDARY
SCALE
0 ½ 1 1½ 2 2½ MLS


OLDHAM
ROAD PROPOSALS
SHAW
ROYTON
HADDI
OLDHAM
LEE
HARTSHEAD
N
FIG. 5.08
INTERNAL BY-PASS
RIPPONDEN ROAD
HUDDERSFIELD ROAD
SHAW ROAD
ASHTON ROAD
MANCHESTER ROAD
HOLLINS ROAD
THE OUTER RING ROAD
LEGEND
PROPOSED MAJOR ROADS
EXISTING ROADS TO BE WIDENED AND IMPROVED.
COUNTY BOROUGH BOUNDARY
SCALE
0 ½ 1 1½ 2 2½ MLS


STOCKPORT
ROAD PROPOSALS
N
AUDENSHAW
Woodley
BREDBURY
STOCKPORT
CHEADLE AND GATLEY
HAZEL GROVE
LEGEND
PROPOSED MAJOR ROADS
EXISTING ROADS TO BE WIDENED AND IMPROVED.
COUNTY BOROUGH BOUNDARY
SCALE
0 ½ 1 1½ 2 2½ MLS.


STOCKPORT
ROAD PROPOSALS
N
AUDENSHAW
STOCKPORT
CHEADLE AND GATLEY
HAZEL GROVE
LEGEND
PROPOSED MAJOR ROADS
EXISTING ROADS TO BE WIDENED AND IMPROVED.
COUNTY BOROUGH BOUNDARY
SCALE
0
1/2
1
1 1/2
2
2 1/2 MLS

SOUTHEAST LANCASHIRE NORTHEAST CHESHIRE (SELNEC) HIGHWAY PLAN 1962

DETAILS OF SCHEMES COMPLETED AND ANNUAL OUT-TURN OF EXPENDITURE 1962-1978 (FIGURE 5.12-1)

eme o.	Scheme Description	Expenditure 1962 Base £ million	Period From-to	63		65		67		69		71		73		75		77		79	
	MANCHESTER																				
	Altrincham Road Improvement	0.11	1963-1965	.05	.03	.03															
	Upper Brook Street Improvement	0.39	1965-1967			.13	.13	.13													
	Link Road 17/7 Stage II	3.56	1965-1968			.89	.89	.89	.89												
	B5166 Styal Road (Diversion from Gatley Boundary to Wilmslow Boundary)	0.24	1966-1968				.08	.08	.08												
	Charlton Road Extension to Mancunian Way	0.24	1966-1969				.06	.06	.06	.06											
	A56 Mancunian Way - Chester Road Junct-Stage II-Chester Road to Donnington	3.47	1966-1967				1.74	1.73													
	A5103 Princess Road/Denmark Road to Mancunian Way	1.20	1968-1972						.24	.24	.24	.24	.24								
	M66-Outer Ring Road-Northern Section M62 to A576, Middleton Road	1.08	1970-1972								.36	.36	.36								
	A5103 Princess Parkway:Wythenshaw Road flyover	0.90	1970-1972								.30	.30	.30								
	Link Road 17/7 Stage I	0.46	1963-1966	.11	.11	.11	.13														
	A5103 Princess Road extension from Road 17/7 to City Centre Road	0.61	1978-1980																.15	.42	.04
	A5103 Princess Road and Parkway Improvement, Completion of M'Way	1.35	1978-1980																.04	.55	.76
	Annual out-turn expenditure-recommended schemes			.16	.14	1.16	3.03	2.89	1.27	.30	.90	.90	.90	--	--	--	--	--	.19	.97	.80
	Cumulative expenditure-recommended schemes			.16	.30	1.46	4.49	7.38	8.65	8.95	10.75	11.65	11.65	11.65	11.65	11.65	11.65	11.65	11.84	12.81	13.61
	Details of schemes outside the plan																				
	A56-Car Bridge at junction with Mancunian Way	0.22								.11	.11										
	BOLTON																				
	A676 Folds Road Widening-Kay Street to Waterloo Street	0.20	1963-1965	.06	.07	.07															
	A6057 Bradford Street Widening. Bridgeman St. to Bury Road	0.10	1963-1965	.04	.03	.03															
	A666 Diversion, Farnworth & Jearsley Bypass	0.24	1966-1969				.06	.06	.06	.06											
	A6057 Trinity Street Bridge	0.24	1967-1971					.05	.05	.05	.05	.04									
	A666 Inner Relief Road Eastern Limb	0.11	1967-1968					.06	.05												
	A6056 Inner Relief Road, Crook St Deane Road and Derby St. and connection to Farnworth & Kearsley Bypass	2.53	1969-1972							.85	.84	.84									
	A6057 Inner Relief Road: Trinity St. and Bridgeman Street	0.39																	.09	.25	.25
	Annual out-turn expenditure-recommended schemes			.10	.10	.10	.06	.17	.16	.96	.89	.88							.09	.25	.25
	Cumulative expenditure-recommended schemes			.10	.20	.30	.36	.53	.69	1.65	2.54	3.42	3.47	3.42	3.42	3.42	3.42	3.42	3.51	3.76	3.81
	LANCASHIRE																				
	Link from M62 at Lostock Circle to Ashburton Road A5081 in Trafford Park	0.88	1965-1968			.22	.22	.22	.22												
	A5063/A5081 Gyratory Scheme	0.60	1966-1971				.10	.10	.10	.10	.10	.10									

SOUTHEAST LANCASHIRE NORTHEAST CHESHIRE (SELENC) HIGHWAY PLAN 1962

DETAILS OF SCHEMES COMPLETED AND ANNUAL OUT-TURN OF EXPENDITURE 1962-1978 (FIGURE 5.12-2)

	LANCASHIRE (CONTINUED)			63	65	67	69	71	73	75	77	79
5	A57-Diversion from Church St. to Corporation Road-Eccles	0.27	1966-1968			.09 .09 .09						
2	A666-Diversion: Farnsworth &Kearsley Bypass.	1.24	1966-1969			.31 .31 .31 .31						
1	B5215 Improvement from Kings Road to proposed improvement at junction with Chester Road A56-Stretford	0.23	1968-1969				.12 .11					
1	M62-Extension from Worsley Court House to A580/Lancashire-Yorkshire Motorway Junction	1.30	1969-1971				.43 .43 .44					
2	B5215 Improvement and diversion from A56 to B5211 Stretford	0.54	1969-1972				.14 .13 .14 .13					
3	A663 Improvement and diversion from B6194 to Store Street, Crompton (Crompton Internal Bypass)	0.32	1969-1971				.10 .11 .11					
5	A640 Diversion from Rochdale Boundary to Lancashire/Yorkshire Motorway Link, Milnrow	0.65	1969-1971				.22 .22 .21					
5	Broadway extension to Lancashire Yorkshire Motorway with Links to Oldham, Middleton and Rochdale	3.04	1969-1972				0.76 0.76 0.76 0.76					
5	A635 Stamford Street Diversion-Ashton-u-Lyne	1.01	1972-1976						.20 .20 .20 .20 .21			
0	A6017 Improvement and Guide Lane Railway Bridge to Nelson Street, Audenshaw	0.23										.13 .10
	Annual out-turn expenditure-recommended schemes			0 0 0		.40 .40 .52	2.07 1.65 1.66	1.09	.20 .20 .20 .21	0	0 .13 .10	
	Cumulative expenditure-recommended schemes			0 0 0		.40 .80 1.32	3.39 5.04 6.70	7.79	7.99 8.19 8.39 8.60	8.60	8.60 8.73 8.83	
	Details of schemes outside the plan											
	A673 West of Bolton to M61 (new Link Road)	0.86	1970-1971				0.43 0.43					
	BURY											
1	Town Centre Relief Road between Rochdale Road and Knowsley Street	0.20	1967-1970			.05 .05 .05 .05						
2	Inner Ring road, Northern Section bury Bridge to Walmersley Road	0.60	1969-1972				.15 .15 .15 .15					
3	Internal Relief Road-Manchester Link from I.R.R.-Northern Section to Knowsley Street and											
4	Internal Relief Road-Rochdale Link from Walmersley Road to Rochdale Road	0.70	1975-1979							.04 .28 .31 .06 .01		
	Annual out-turn expenditure expenditure-recommended schemes					.05 .05 .20	.20 .15 .15	0	0 .04 .28 .31 .06 .01			
	Cumulative expenditure-recommended schemes					.05 .10 .30	.50 .65 .80	.80	.80 .84 1.21 1.43 1.49 1.50			
	SALFORD											
4	These 2 schemes wre completed in several											
5	stages over the period 1963-1974	2.30		.12 .06 0		.42 .42 .42	0 .10	.10	.22 .22 .22			
3	A6-Bolton Road Improvement	0.75								.06 .52 .17		
7	A5063-Trafford Road to Broad St. improvement	0.30							.15 .15			
	Annual out-turn expenditure-recommended schemes			.12 .06 0		.42 .42 .42	0 .10	.10	.22 .22 .37	.21 .52 .17		
	Cumulative expenditure-recommended schemes			.12 .18 0		.60 1.02 1.44	1.44 1.54	1.64	1.85 2.06 2.42	2.63 3.15 3.32		

SOUTHEAST LANCASHIRE NORTHEAST CHESHIRE (SELNEC) HIGHWAY PLAN 1962

DETAILS OF SCHEMES COMPLETED AND ANNUAL OUT-TURN OF EXPENDITURE 1962-1978 (FIGURE 5.2-3)

	CHESHIRE			63		65		67		69		71		73		75		77		79	
404	This scheme was completed in 3 stages																				
	(i) A538 Hale Barns, Hale Road Improvement	0.13	1963-1966	.03	.03	.03	.04														
	(ii) A538 Ringway Diversion	0.46	1967-1969					.15	.15	.16											
	(iii) M56 Ringway Link to Princess Parkway Extension	0.20	1970-1972									.07	.07	.06							
427	Cheadley and Gatley-Station Road and Ravensoak Road inc. Railway Bridge	0.24	1965-1968			.06	.06	.06	.06												
411	B5311 Marsland Road and Old Hall Road Sale	0.35	1970-1972									.12	.11	.12							
401	A560 Altrincham Level Crossing	0.40	1971-1973										.13	.14	.13						
	Annual out-turn expenditure-recommended schemes			.03	.03	.09	.10	.21	.21	.16	.19	.31	.32	.13	0	0	0	0	0	0	0
	Cumulative expenditure-recommended schemes			.03	.06	.15	.25	.46	.67	.83	1.02	1.33	1.65	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78
	OLDHAM																				
701	Southern Internal Bypass-Mumps to Manchester Street	2.05	1967-1971					.41	.41	.41	.41	.41									
702	A62 Bottom o'th'Moor Improvement-Mumps to Cross Street	.19	1969-1971							.06	.06	.07									
705	Broadway Extension to Lancashire-Yorkshire Motorway with link to Oldham	.08	1969-1972							.02	.02	.02	.02								
707	Extension of Southern Internal Bypass to Rochdale Road	1.40	1975-1979													.13	.19	.50	.54	.04	
	Annual out-turn expenditure-recommended schemes			0	0	0	0	.41	.41	.49	.49	.50	.02	0	0	.13	.19	.50	.54	.04	0
	Cumulative expenditure-recommended schemes			0	0	0	0	.41	.82	1.31	1.80	2.30	2.32	2.32	0	2.45	2.64	3.14	3.68	3.72	3.72
	STOCKPORT																				
853	A560-Stockport East-West Bypass	0.18	1963-1966	.04	.04	.05	.05														
856	North and North-Easterly Section of town Centre Ring-Road	0.21	1973-1975											.07	.07	.07					
	Annual out-turn expenditure-recommended schemes			.04	.04	.05	.05	0	0	0	0	0	0	.07	.07	.07	0	0	0	0	0
	Cumulative expenditure-recommended schemes			.04	.08	.13	.18	.18	.18	.18	.18	.18	.18	.25	.32	.39	.39	.39	.39	.39	.39

TE: Scheme Nos. 851,852,854 and 855-are different stages of Stockport East-West bypass. They were planned as classified road but eventually built as trunk road. I have transferred them to the trunk road list.

	ROCHDALE																				
51	This scheme was completed in 3 stages																				
	(i) Inner Relief Road-North West Section	.45	1966-1969				.11	.12	.11	.11											
	(ii) A58 Manchester Road-Sudden to Town Meadows	.82	1970-1972									.27	.28	.27							
	(iii) A58 Halifax Road	.64	1972-1974											.21	.22	.21					
705	Broadway Extension to Lancashire-Yorkshire Motorway with Link to Rochdale	1.00	1969-1972							.25	.25	.25	.25								
	Annual out-turn expenditure-recommended schemes			0	0	0	.11	.12	.11	.36	.52	.53	.73	.22	.21	0	0	0	0	0	0
	Cumulative expenditure-recommended schemes			0	0	0	.11	.23	.34	.70	1.22	1.75	2.48	2.70	2.91	2.91	2.91	2.91	2.91	2.91	2.91

SOUTHEAST LANCASHIRE NORTHEAST CHESHIRE HIGHWAY PLAN - 1962

QUANTITATIVE (FMQ) AND RATE (FMR) MEASURES CALCULATIONS - 1963 TO 1978 - (FIGURE 5.12-1)

AREA		1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
	Scheme Proposed for Details see Figs:	401	427	403 427	402 403	209 402 411	407 417 I/C Scheme	407 408 I/C Scheme	None	410	426 430	During this period the plan anticipated an annual Highway expenditure of £1.65 million per annum 1962Base					
SHIRE	Cumulative Estimated Cost	0.40	0.55	1.10	1.70	2.45	3.08	3.91	3.81	4.11	4.42	6.07	7.72	9.37	11.02	12.67	14.32
	Annual Out-turn Expenditure	.03	.03	.09	.10	.21	.21	.16	.19	.31	.32	.13	0	0	0	0	0
	Cumulative Total	0.03	0.06	0.15	0.25	0.46	0.67	0.83	1.02	1.33	1.65	1.78	1.78	1.78	1.78	1.78	1.78
	FMR	0.08	0.11	0.14	0.15	0.19	0.22	0.22	0.27	0.32	0.37	0.29	0.23	0.19	0.16	0.14	0.12
	Cost of Implemented Scheme not programmed	ONLY ONE SCHEME (IMPROVEMENT TO A538-WILMSLOW STATION ROAD										0.08	0.15	0.15	0.15	0.15	0.15
	CumulativeFMQ	WAS UNDERTAKEN OUTSIDE THE PLAN DURING 1973-74 IN THE SELNEC AREA OF CHESHIRE. THEREFORE FMQ=100 DURING THE PERIOD 1963-1972 INCLUSIVE.										0.96	0.92	0.92	0.92	0.92	0.92
	Scheme Proposed For details see Figs:	701	701	701 702	NONE	NONE	707,715	707 205	None	None	None	During this period the plan anticipated an annual highway expenditure of £0.55 million per annum-1962Base					
OLDHAM	Cumulative Estimated Cost	0.50	1.00	2.35	2.35	2.35	3.49	4.28	4.28	4.28	4.28	4.83	5.38	5.93	6.48	7.03	7.58
	Annual Out-turn Expenditure	0	0	0	0	.41	.41	.49	.49	.50	.02	0	0	.13	.19	.50	.54
	Cumulative Total	0	0	0	0	0.41	0.82	1.31	1.80	2.30	2.32	2.32	2.32	3.45	2.64	3.14	3.68
	FMR	0	0	0	0	0.49	0.23	0.31	0.42	0.54	0.54	0.48	0.43	0.58	0.41	0.45	0.49
	FMQ	NO SCHEMES OUTSIDE THE PLAN WERE UNDERTAKEN IN OLDHAM COUNTY BOROUGH AREA DURING THE PERIOD 1963-1978. THEREFORE FMQ=100 FOR ALL OF THIS PERIOD.															
	Scheme Proposed For details see Figs:	None	None	None	852	852	None	None	210	210	210	During the period the plan anticipated an annual highway expenditure of £0.37 million per annum-1962Base					
EPORT	Cumulative Estimated Cost	0	0	0	0.40	0.80	0.80	0.80	1.80	2.80	3.80	4.17	4.54	4.91	5.28	5.65	6.02
	Annual Out-turn Expenditure	.04	.04	.05	.05	0	0	0	0	0	0	.07	.07	.07	0	0	0
	Cumulative Total	0.04	0.08	0.13	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.25	0.32	0.39	0.39	0.39	0.39
	FMR	-	-	-	0.45	0.23	0.23	0.23	0.10	0.06	0.04	0.06	0.07	0.08	0.07	0.07	0.06
	FMQ	NO SCHEMES OUTSIDE THE PLAN WERE UNDERTAKEN IN STOCKPORT COUNTY BOROUGH AREA DURING THE PERIOD 1963-1978. THEREFORE FMQ=100 FOR ALL THIS PERIOD.															
	Scheme Proposed For details see Figs:	751	751	751 752	753 754	753 754	205 751	205 751	None	None	None	During this period the plan anticipated an annual highway expenditure of £0.36 million per annum-1962Base					
HDALE	Cumulative Estimated Cost	0.60	1.40	2.48	2.78	3.18	4.18	4.98	4.98	4.98	4.98	5.34	5.70	6.06	6.42	6.78	7.14
	Annual Out-turn Expenditure	0	0	0	.11	.12	.11	.36	.52	.53	.73	.22	.21	0	0	0	0
	Cumulative Total	0	0	0	0.11	0.23	0.34	0.70	1.22	1.75	2.48	2.70	2.91	2.91	2.91	2.91	2.91
	FMR	0	0	0	0.04	0.07	0.08	0.14	0.24	0.35	0.50	0.51	0.51	0.48	0.45	0.43	0.41
	FMQ	NO SCHEMES OUTSDIE THE PLAN WERE UNDERTAKEN IN ROCHDALE COUNTY BOROUGH AREA DURING THE PERIOD 1963-1968. THEREFORE FMQ=100 FOR ALL THIS PERIOD.															
TAL OR NEC EA SIFIED ADS	Cumulative Estimated Cost	4.92	12.32	19.83	25.41	32.43	39.78	49.66	59.17	68.13	77.58	93.31	109.03	124.76	140.48	156.21	171.94
	Cumulative Expenditure 1962 - Base	0.45	0.82	2.22	6.39	11.06	14.21	18.75	23.69	28.72	32.58	32.99	33.84	35.49	35.69	36.76	37.80
	FMR-SELNEC Classified Road	0.09	0.07	0.11	0.25	0.34	0.36	0.38	0.40	0.42	0.42	0.35	0.31	0.28	0.25	0.24	0.22
	Cumulative Cost of Implemented Schemes not planned £ Millions	0	0	0	0	0	0	0.54	1.08	1.08	1.16	1.23	1.23	1.23	1.23	1.23	1.23
	FMQ	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.96	0.96	0.97	0.97	0.97	0.97	0.97	0.97	0.97

SOUTHEAST LANCASHIRE NORTHEAST CHESHIRE HIGHWAY PLAN - 1962

QUANTITATIVE (FMQ) AND RATE (FMR) MEASURES CALCULATIONS - 1963 TO 1978 (FIGURE 5.12-2)

AREA		1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
MANCHESTER	Scheme proposed details see figs):	601 603	602 603 606	602 603 606 614	604 607 609	209 606 613	203 606 613	207 606 613 615	207 210 624 625 615	207 210 615 120 625	207,210 612 614	During this period the plan anticipated an annual highway expenditure of £4.88 million - 1962 Base.					
	Cumulative Estimated Cost	2.11	4.96	6.96	8.54	9.65	10.85	15.85	21.09	26.77	33.57	38.45	43.33	48.21	53.09	57.97	62.85
	Annual Out-turn Expenditure	.16	.14	1.16	3.03	2.89	1.27	.30	.90	.90	.90	No Major Principal Road construction took place in Manchester during this period.					.19
	Cumulative Total FMR	.16 0.08	.30 0.06	1.46 0.21	4.49 0.53	7.38 0.77	8.65 0.80	8.95 0.57	9.85 0.47	10.75 0.40	11.65 0.35	11.65 0.30	11.65 0.27	11.65 0.24	11.65 0.22	11.65 0.20	11.84 0.19
	Cost of Implemented Scheme not Programmed Cumulative FMQ	0 100	0 100	0 100	0 100	0 100	0 100	0.11 99	0.22 0.98	0.22 0.98	0.22 0.98	0.22 0.98	0.22 0.98	0.22 0.98	0.22 0.98	0.22 0.98	0.22 0.98
BOLTON	Scheme Proposed for details see figs:	301	212 302	212 303	302	306 307	304	-	306	-	-	During this period the plan anticipated an annual highway expenditure of £0.996 million - 1962 Base.					
	Cumulative Estimated Cost	0.27	0.77	1.97	3.25	3.57	3.75	3.75	3.94	3.94	3.94	4.94	5.93	6.93	7.92	8.92	9.92
	Annual Out-turn Expenditure	.10	.10	.10	.06	.17	.16	.96	.89	.88	No major principal road construction activities took place in Bolton during this period.					.09	.25
	Cumulative Total FMR	.10 0.37	.20 0.26	.30 0.15	0.36 0.11	0.53 0.15	0.69 0.18	1.65 0.44	2.54 0.65	3.42 0.87	3.42 0.87	3.42 0.69	3.42 0.58	3.42 0.49	3.51 0.43	3.76 0.39	0.38
	Cost of Implemented Scheme not Programmed - Cumulative FMQ	NO SCHEMES OUTSIDE THE PLAN WERE UNDERTAKEN IN BOLTON COUNTY BOROUGH AREA DURING THE PERIOD 1963-1978. THEREFORE FMQ=100 FOR ALL OF THIS PERIOD.															
LANCASHIRE	Scheme proposed (for details see figs):	212 212 502	212 502 512 513	503 504 507 511	205 504 505 507	201,205 506,508	201,204 506,515	509,519 525	525	None	During this period the plan anticipated an annual highway expenditure of £4.68 million - 1962 Base.						
	Cumulative Estimated Cost	0.50	1.40	2.63	3.94	6.28	8.90	11.26	12.56	13.07	13.07	17.75	22.43	27.11	31.79	36.47	41.15
	Annual Out-turn Expenditure	0	0	0	.40	.40	.52	2.07	1.65	1.66	1.09	.20	.20	.20	.21	0	0
	Cumulative Total FMR	0 0	0 0	0 0	.40 .10	.80 .13	1.32 0.15	3.39 0.30	5.04 0.40	6.70 0.51	7.79 0.60	7.99 0.45	8.19 0.37	8.39 0.31	8.60 0.27	8.60 0.24	8.60 0.21
	Cost of Implemented Scheme not Programmed Cumulative FMQ	0 100	0 100	0 100	0 100	0 100	0 100	0.43 0.92	0.86 0.89	.86 0.91	.86 0.91	.86 0.91	.86 0.91	.86 .92	.86 .92	.86 .92	.86 .92
BURY	Scheme Proposed for details see figs:	None	351 352	351	356	353	None	354	None	359	359	During this period the plan anticipated an annual average highway expenditure of £0.20 million - 1962 Base.					
	Cumulative Estimated Cost	0	0.70	0.80	0.91	1.41	1.41	1.61	1.61	1.75	1.89	2.09	2.29	2.49	2.69	2.89	3.09
	Annual Out-turn Expenditure	0	0	0	0	0.05	0.05	0.20	0.20	0.15	0.15	0	0	0.04	0.28	0.31	0.06
	Cumulative Total FMR	0 0	0 0	0 0	0 0	0.05 0.04	0.10 0.07	0.30 0.19	0.50 0.31	0.65 0.37	0.80 0.42	0.80 0.38	0.80 0.35	0.84 0.34	1.12 0.42	1.43 0.49	1.49 0.48
	Cost of Implemented Scheme not Programmed - Cumulative FMQ	NO SCHEMES OUTSIDE THE PLAN WERE UNDERTAKEN IN BURY COUNTY BOROUGH AREA DURING THE PERIOD 1963-1978. THEREFORE FMQ=100 FOR ALL OF THIS PERIOD.															
SALFORD	Scheme Proposed for details see figs:	804	804	None	None	803 807	807	None	207 805	207 806	207	During this period the plan anticipated an annual average highway expenditure of £2.04 million-1962Ba					
	Cumulative Estimated Cost	0.54	1.54	1.54	1.54	2.74	3.32	3.32	5.10	6.43	7.63	9.67	11.71	13.75	15.79	17.83	19.87
	Annual Out-turn Expenditure	0.12	0.06	0	0.42	0.42	0.42	0	0.10	0.10	0.22	0.22	0.37	0.21	0.52	0.17	0
	Cumulative Total FMR	0.12 0.22	0.18 0.12	0.18 0.12	0.60 0.39	1.02 0.37	1.44 0.43	1.44 0.43	1.54 0.30	1.64 0.26	1.86 0.24	2.08 0.22	2.45 0.21	2.66 0.19	3.18 0.20	3.35 0.19	3.35 0.17
	Cost of Implemented Schemes not Programmed - Cumulative FMQ	NO SCHEMES OUTSIDE THE PLAN WERE UNDERTAKEN IN SALFORD COUNTY BOROUGH AREA DURING THE PERIOD 1963-1978. THEREFORE FMQ=100 FOR ALL OF THIS PERIOD.															

CHAPTER SIX

DISCUSSION OF RESEARCH METHODS

* * *

"Despite the thousands - tens of thousands more likely - of articles and books in which concepts have been explicated, models constructed, hypotheses framed and data reported and analysed, there are not half a dozen general and non-trivial scientific propositions which an urban political scientist can offer the waiting world. Admittedly, he is hardly any worse off than his fellow social scientist, but this is rather cold comfort."

- Edward C. Banfield : 1975

In chapter three, it was explained that the lack of useful methodologies in the immediate area of my research was the reason why the literature search was extended to include the general area of urban political and social sciences. The above quotation suggest that even in this extended field, the research methods are not fully developed. In the absence of agreed methods, researches to date have been dominated by case studies.

6.1 LIMITATIONS OF POPULAR RESEARCH METHODS

Case studies have the following six limitations:
Firstly, they normally concentrate on conspicuous events, actors and outcomes. Consequently the result is of little theoretical or general value. Peter Rossi in calling unequivocally for systematic studies stated that,
"case history after case history of communities will lead nowhere and has led nowhere."[2]

Secondly case studies are not very useful in assessing the comparative importance of factors identified in the study process. For instance, Kenneth Newton in 1974, in a mood of self-criticism wrote,[3]

"Without a comparative study we cannot tell (a) how Birmingham (referring to his case study on Democratic Processes and Decision Making in Birmingham[4]) compares with other cities in terms of the number and strength of local pressure groups, or (b) whether these groups seem to have any effect on public policy, or (c) in what areas are they effective or ineffective, or (d) what sorts of factors might explain these local findings ..... Until we have some idea of how cities fit into the general pattern, case studies of particular cities are very limited in the kind of generalisation they can provide."

Later works tried to go beyond this limitation of case studies by comparing a number of communities but it soon became clear that it was difficult to generalize on the basis of three, four or even five studies.[5]

Thirdly, not all relevant factors are amenable for analysis by case studies. Dearlove attempted to assess the significance of officer participation in policy formulation in the Royal Borough of Kensington and Chelsea. He concluded that,

"Many of the officers were interviewed but it proved impossible to break through the cultural cliche that they were simply servants advising the all-powerful, policy-making councillors whose decisions they readily implemented."[6]

Fourthly, interviews made as part of case studies normally relate to past events which may be as much as 20 years old. The accuracy associated with recalling such events is questionable. The shortcoming is serious in the case of local government where most councillors and leaders of pressure-groups are part-timers who are likely to be more concerned with their main occupations.

Fifthly, urban policy-making is complex and values change fast. Policies that are highly acclaimed today may be laughed out-of-court tomorrow. Key decision-makers associated with plans for the provision of urban motorways when interviewed for case studies are likely to have significant reservations about discussing decisions which were not implemented and therefore seen as failures in retrospect.

Finally, it is often difficult to allow for cumulative effect or for double counting of influencing factors using the case study approach. I will further discuss this point in chapter 14.

It is interesting to note that a number of authors, prior to embarking on case-studies, have cited the first three of the above criticisms. However they justified their approach on the basis that their objectives could not be realised by any other means.[7]

At the other end of the spectrum of urban policy-making studies; lies the highly complex multivariate-analysis which attempts to relate a dependent variable to a large number of independent variables. This method of analysis, known more colloquially as "dredging for co-relations" has become fashionable with the advent of cheap computing facilities. A typical analysis of this nature used 52 independent variables to explain variation in service provisions in an unspecified number of English county boroughs.[8] In this respect it is worth noting that the reliability of a statistical analysis reduces as the number of independent variables increases. It is theoretically possible to fit a polinomial curve to any set of data when the sample size is equal to the number of independent variables!

6.2 THE RESEARCH METHOD EMPLOYED IN THIS THESIS

The method I have used in this research utilizes the versatility of the case-study approach with the rigor of statistical analysis. Davies in recommending this method stated that,

"This is not to imply that the case-study approach does not have a valuable role to play[9] ..... (However) the techniques associated with the case-study approach almost inevitably produce a biased picture of the relative importance of casual factors, the biases conforming to those present in the grammars of meaning of the participants. Statistical model-building can incorporate biases of its own. The techniques explain as much as possible using the variables ..... and so can overstate (their) importance. Whether or not they do so depends mainly on the degree to which the researchers subject themselves to the testing and development of a precise causal argument compatible with a wide and well-organised range of other (often non-quantitative) evidence rather than merely dredge for likely relationships. There are no reasons for claiming that any one technique is superior to others."

In this research, data is drawn from two sources - case studies and published statistics (updated as necessary with new surveys).

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In this research, data is drawn from two sources - case studies and published statistics (updated as necessary with new surveys).

For testing the influence of these national factors, I have employed various non-statistical techniques as appropriate. On the otherhand, hypotheses relating to local factors are sometimes supported by analytical methods but always tested using statistical methods.

In order to complete the statistical analysis, I needed a wide statistical base which was fortunately obtainable for transport. This research involves initially the testing of a number of hypotheses in relation to each key-factor measure taken in turn. Finally, the more important factors are tested using multiple regression techniques for their cumulative effect on the implementation of plans.

6.3 CONCLUSION

Recently, researches in urban political and social sciences have been dominated by case studies. This approach has a number of limitations, specially related to the general validity of their findings. On the other hand, analysis of social phenomena by complex statistical methods, disregarding causal explanations has also its disadvantages. In this thesis, I have used case studies to formulate hypotheses which are then tested by quantitative methods.

6.4 NOTES : CHAPTER SIX

1. Young, K (1975) Forward by Edward C. Banfield published in ESSAYS ON THE STUDY OF URBAN POLITICS
   London, The Macmillan Press Ltd.; pp. VII-VIII

2. Rossi, P.H. (1960) Theory, research and practice in community organisation published in SOCIAL SCIENCE AND COMMUNITY ACTION
   East Lansing, p. 21

3. Newton, K. (1975) Community politics and decision-making published in Young, K. op.cit; pp. 23-24

4. Newton, K. (1976) SECOND CITY POLITICS
   London, W.1, Oxford University Press, Ely House

5. For instance refer to (i) Gregory, R. (1971) THE PRICE OF AMENITY: FIVE CASE STUDIES IN CONSERVATION AND GOVERNMENT
   London, Macmillan
   (ii) Grant, J. (1977) THE POLITICS OF URBAN TRANSPORT PLANNING
   London, W.1, Earth Resources Research Ltd., 40 James St.

6. Dearlove, J. (1973) THE POLITICS OF POLICY IN LOCAL GOVERNMENT
   London, NW1 2DB, Syndics of the Cambridge University Press, Bentley House, 200 Euston Road; p.

7. For instance, Grant, J; p. 41

8. Boaden, N. (1971) Urban Policy-Making
   London, NW1, Cambridge University Press, Bentley House, 200 Euston Road; pp. 126-135

9. Davies, B. (1975) Casual processes and techniques in the modelling of policy outcomes published in Young, K. op.cit; p. 83

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6. Dearlove, J. (1973) THE POLITICS OF POLICY IN LOCAL GOVERNMENT London, NW1 2DB, Syndics of the Cambridge University Press, Bentley House, 200 Euston Road; p.

7. For instance, Grant, J; p. 41

8. Bosden, N. (1971) Urban Policy-Making London, NW1, Cambridge University Press, Bentley House, 200 Euston Road; pp. 126-135

9. Davies, B. (1975) Casual processes and techniques in the modelling of policy outcomes published in Young, K. op.cit; p. 83

PART TWO

INFLUENCE OF NATIONAL FACTORS

CHAPTER (vii) EFFECT OF NATIONAL ECONOMIC FACTORS ON IMPLEMENTATION

(viii) EFFECT OF CHANGING VALUE SYSTEMS ON IMPLEMENTATION

(ix) EFFECT OF PREDICTIVE ACCURACY OF STUDIES ON IMPLEMENTATION

CHAPTER SEVEN

EFFECT OF NATIONAL ECONOMIC FACTORS ON IMPLEMENTATION OF URBAN TRANSPORT PLANS

* * *

The principal purpose of this chapter is to examine if there was a central Government shortage of funds which led to the low implementation of urban transport plans.

Recommendations contained in urban transport plans call for expensive infrastructure investments, usually on roads. The provision of trunk roads is the responsibility of the Minister of Transport. Also substantial Exchequer grant assistance is given to local authorities to undertake non-trunk road and public transport schemes.[1] At times of unforeseen national economic problems, the Government might decide, amongst other fiscal measures, to reduce transport investment. For instance, in July 1965, the Chancellor of the Exchequer announced measures to help eliminate the balance of payments deficit and maintain the strength of sterling.[2] These measures included £55 million worth of road schemes deferred, in order to reduce Exchequer expenditure by about £7 million in that year. In this respect, the following hypothesis is examined:

HYPOTHESIS I : Reductions in Exchequer grant assistance was NOT a substantial reason for the low implementation of urban transport plans.

To examine this hypothesis, the Government's expenditure plans in the sixties covering the period until mid-70s is compared with the out-turn of expenditures for the same period. There are no published documents giving details of the planned expenditure. Therefore, in the following section, an assessment is made of capital requirements for long term plans, the Ministry had for the development of local and national highway network. Until the enactment of Transport Act 1968, local public transport infrastructure provision was not grant aided. Hence this will not be included in this assessment which refers to the Government's intentions in mid-60s.

7.1 ASSESSMENT OF CAPITAL REQUIREMENTS FOR DEVELOPMENT OF ROADS

Initially two estimates are made from separate sources in order to arrive at a realistic assessment.

7.1.1 Estimate of budgeted capital : Method I

"In the SELNEC transportation study, they refer to the advice of the Ministry as to the capital sums likely to be available for investment in transport infra-structure over a period of 13 years. Is this particular allocation of money to SELNEC an exception to the generalised allocation that applies to the grants as a whole?"

"The practice has been where an authority is undertaking a transportation study, to give it an estimate of the order of magnitude of expenditure likely to be in the event to be reasonable because otherwise one would tend to get completely unrealistic proposals. The basis for this is to project a trend level of expenditure in national terms taking into account the expected growth of the gross national product and what is seen as the expected emphasis on transport over some years ahead, and then to allocate the money broadly among authorities by reference to the working population in the areas ....."

This answer was given by a principal finance officer at the Department of the Environment in response to the question raised by the Chairman of the Expenditure Committee on Urban Transport Planning.[3]

The consultant's to the Oxford Central Area Study reported that,

"We obtained from the Ministry of Transport projections of the likely total transport investment in Oxford.[4] The financial limit upon which a grant would be made up to the year 1981 is estimated to be £6¾ million and up to year 1991, a tentative total of £16 million, both figures being subject to a fluctuation of plus or minus 20%. These levels of capital outlay are governing factors in the choice and stages of new transportation systems."

The above quotations attest that forecasts of the probable level of centrally approved expenditure were incorporated by most local authorities directly in their transport plans.

I have estimated that the population-weighted average highways capital rate used by the Ministry to base their advice was £12.21 per annum (1966/67 values) per head of working population. In other words,

capital budget ry provisions, the Ministry allocated for any study covering a given number of years

= £12.21 x working population x study period covered by the plan

My calculations are based on a sample of 28 studies. They were selected from the studies which were in progress in the sixties. Later studies conducted in a substantially changed legal and socio-economic environment are thus avoided. From this reduced population, a sample was selected to reflect a uniform geographic distr'bution of studies and by population of study area. In this respect, it is worth noting that,

"The practice has been where an authority is undertaking a transportation study, to give it an estimate of the order of magnitude of expenditure likely to be in the event to be reasonable because otherwise one would tend to get completely unrealistic proposals. The basis for this is to project a trend level of expenditure in national terms taking into account the expected growth of the gross national product and what is seen as the expected emphasis on transport over some years ahead, and then to allocate the money broadly among authorities by reference to the working population in the areas ....."

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Bath - A planning and transport study, which overtly ignored the Ministry's recommendation regarding expenditure levels was removed from the population prior to sampling. The total working population in England and Wales, based on 1966 Census was 21.4 million. On this basis, it is estimated that the Government anticipated to spend in the region of

$$£12.21 \times 21.4 \times 10^6 \times 10 = £2613 \text{ million}$$

on highway construction and improvement in England and Wales in a decade from the mid-sixties. The last sum, on a pro-rata basis for the 9 year period 1965/66 to 1973/74 would be;

$$£2613 \times \frac{9}{10} = £2351 \text{ million}$$

7.1.2 Estimate of budgeted capital - Method II

This method is based on estimating the planned expenditure on trunk and principal roads separately.

Trunk road capital estimate : In 1960, the Ministry of Transport evolved a "Master Plan" which set out a target for the construction of 1000 miles of motorway and the construction or the modernisation of nearly 1700 miles of associated trunk road network within England and Wales by early 1970s.[5] The progress report on roads for 1965 issued by the Ministry stated that

"For the inter-urban road system Minister's intention is to complete the 1000 miles of motorway in England and Wales in the early 1970s. Of this total, 340 miles were open to traffic at the end of March 1965 and in the three years 1965 to 67 another 220 miles will have been completed. The Ministry plans that over 300 miles of trunk road should have been built or reconstructed in the period 1965 to 70 .... Expenditure in England and Wales on the construction of motorways and trunk roads in 1965/66 is estimated at some £90 million and in 1969/70 that it should amount to some £130 million ..... Despite the improved conditions resulting from the construction of new roads by that time, it is estimated that in 1970 about 2250 miles of trunk road will be seriously overloaded, as against 1250 at present ..... the Minstry is now preparing a plan for the further improvement of the inter-urban road system in the decade from 1970 ..... The Ministry aims to complete the preparation of the plan in the second half of 1966. It will include schemes already planned."

Figure 7.01 (table) is prepared on the basis of information, relating to trunk roads, given in the last paragraph.

FIGURE 7.01 (Table)

ESTIMATE FOR THE "1000 MILE MOTORWAY PROGRAMME" AND THE ASSOCIATED TRUNK ROAD NETWORK (1965/66 price basis)

(A) PERIOD OF COMPLETION

i. Total length of the 1000 mile programme completed by 1964/65 = 340 miles

ii. Period of completion for the 340 miles above = 5 years

iii. ∴ Rate of completion ≏ 70 miles per year

iv. Length programmed for completion in the 3 year period 1965/66 to 1967/68 = 220 miles

v. ∴ Rate of completion planned for the mid-sixties = 70-75 miles/year

vi. Assuming a rate of completion of 70-75 miles per year, estimated date of completion of the 1000 mile programme and associated trunk road network

≏ 6 years from (and including) 1968/69

= 1973/74

(B) COST OF CONSTRUCTION

i. Planned expenditure for the period 1965/66 to 1969/70

= £ (90 + 100 + 110 + 120 + 130) million = £550 million in 1965/66 values

ii. Assuming the same rate of increase of £10 million per annum in expenditure

Planned expenditure for the period 1965/66 to 1973/74

= £ (550 + 140 + 150 + 160 + 170) million = £1170 million in 1965/66 values = £1230 million (1966/67 values)

iii. Assuming no increase in rate of expenditure after 1969/70,

Planned expenditure for the period 1965/66 to 1973/74

= £ (£550 + (4 x 130) million

= £1070 million in 1965/66 values

= £1125 million in 1966/67 values

∴ It is concluded that the Ministry planned to invest between £1,125 and £1,230 million on completing the 1000-mile motorway programme by about 1973/74.

Principal road capital estimate : Ministry of Transport's annual roads progress report for 1964/65 stated that,

"Local authorities have been invited in a circular issued on 30th April 1965, to consider the urban road schemes they would wish to put in preparation for commitment during the early years of 1970s, within a planning level for England and Wales of £575 million (grant)[6] ..... The total value of these schemes, including the local authorities own contributions would be about £820 million ..... Expenditure by central and local government on urban road schemes in England and Wales amounted to £55 million in 1964/65. By 1969/70, this is expected to increase to over £135 million. Over the five year period the urban road programme will thus be more than doubled ..... The urban-road programme cannot be expected to maintain such a rate of expansion indefinitely ..... an indication of the level of investment in the 1970s for which it is realistic to plan has already been given. While this will be sufficient to maintain the momentum of the present urban road programme, it will not permit a programme of a radically different order of magnitude to be carried out."

The following analysis (see Fig. 7.02 - table) of the long term intentions of the Ministry, regarding urban highway provisions is presented on the basis of the last quotation. Referring to the last line of Fig. 7.02 - table , the total trunk and principal road expenditure planned for the 9 year period from 1965/66 to 1973/74 is estimated to be in the range £2,150 to £2,550 million. This compares with an estimated value of £2351 million by Method I. (See page 7.03).

FIGURE 7.02 (Table)

ESTIMATE FOR THE PRINCIPAL ROAD CONSTRUCTION PROGRAMME

(1965/66 price basis)

(A) PERIOD OF EXPENDITURE

(i) Rate of expenditure during 1964/65 = £55 million per annum

(ii) Increased rate of expenditure planned during 1969/70 = £135 million per annum

(iii) Compounded rate of increase of expenditure per annum over the 5 year period from 1964/65 to 1969/70 $\simeq$ 16 per cent

(iv) Assuming no further increase in expenditure after 1968/69, period required to spend the £820 million

$= \frac{820}{135} \simeq$ 6 years

(v) Assuming a rate of increase in expenditure of 16 percent per annum, additional period after 1969/70 required to spend the £820 million

= 4.1 years (say 4 years)

Therefore it is reasonable to conclude that the Ministry intended that the budget of £820 million should be spent between 4 to 6 years from 1968/69.

(B) COST OF CONSTRUCTION

(i) Planned expenditure for the period 1965/66 to 1969/70 assuming a compound rate of increase of 16 percent per annum = £55 (1.16 + 1.35 + 1.56 + 1.81 + 2.10) million

= £438.9 million (say £440 million)

(ii) Range within which planned expenditure for the 4 year period from 1970/71 to 1973/74 is likely to lie

= £135 x 4 million to £820 million = £540-£820 million

(iii) Range within which the budgeted expenditure for the 9 year period from 1965/66 to 1973/74 is likely to lie

= £(540 + 440) million to £(820 + 440) million

= £980 million - £1260 million (1964/65 prices)

= £1030 million - £1320 million (1966/67 prices)

Therefore range within which total trunk and principal road expenditure planned for the 9 year period from 1965/66 to 1973/74 (estimated by Method II) is likely to lie

= £(1030 + 1120) to £(1320 + 12 30) = £2150 million to £2550 million

7.2 APPROPRIATION OF BUDGETS AND EXPENDITURES (See Fig. 7.03 - Table)

In this section, firstly the budgeted sum of £2150-£2550 million from the previous section will be apportioned on the basis of working population, amongst county boroughs and county councils, the two main groups of authorities who were locally responsible for the provision of highways in the provinces and the Greater London Council. Secondly the budgets will be compared with the cumulative out-turn expenditure for the period 1965/66 to 1973/74 incurred by the various authorities.

7.2.1 Appropriation of Budgets

The planned expenditure in Figure 7.03 (table) was computed on the following basis.

The working population living in county borough areas in England and Wales (including London) based on 1966 census was 6.1 million, living in county areas was 11.3 million and in the Greater London Council's administrative area was 4.0 million respectively.[7]

Therefore on the basis of working population, the capital expenditure planned for the period 1965/66 to 1973/74 in

(i) County borough areas in England and Wales (excluding London)

$$= \frac{6.1}{(6.1 + 11.3 + 4.0)} \times 100 = 28 \text{ percent of total planned expenditure range}$$

(ii) County Council areas in England and Wales = 53 percent of total

(iii) Greater London administrative area = 19 percent of total

The division between trunk and non-trunk road programmes is made on the basis that the county borough councils' long term highways budget calculated on the basis of last paragraph was expected to support negligible amount of trunk road programmes. The following evidence by James and Wardle of the Department of the Environment given to the Expenditure Committee on Urban Transport Planning supports my last statement.[8]

FIGURE 7.03 (Table)

COMPARISON OF BUDGETED AND ACTUAL EXPENDITURES FOR LONG TERM MAJOR HIGHWAY CONSTRUCTION AND IMPROVEMENT IN ENGLAND AND WALES : 1965/66 TO 1973/74 (1966/67 price basis)

TYPE OF AUTHORITY	PLANNED EXPENDITURE £ MILLION	ACTUAL EXPENDITURE £ MILLION	ACTUAL AS % OF PLANNED EXPENDITURE
County borough councils (excluding London - Nearly all on principal roads)	614 - 727	329	45 - 54
Greater London Council			
(i) Trunk roads within administrative area	67	44	66
(ii) Principal roads	336 - 410	170	41 - 51
Greater London area total	403 - 477	214	45 - 53
County councils excluding London			
(i) Trunk roads	1058 -1163	1247	107 - 108
(ii) Principal roads	80 - 183	464	254 - 580
County councils area total	1138 -1346	1711	127 - 150
Trunk and principal roads (England & Wales) total	2155 -2550	2254	88 - 105
of which			
Trunk roads (England & Wales) total	1125 -1230	1291	105 - 115
Principal roads (England & Wales) total	1030 -1320	963	73 - 93

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of which			
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Principal roads (England & Wales) total	1030 -1320	963	73 - 93

- (Mr. Wardle) "It does not follow that because it is the A1, it is necessarily a trunk road. When it comes to the boundaries of New Castle it may become a principal road."

- (Dame Irene Ward) "But why? This is a big road which goes from South to North; you cannot divide that up? - Indeed, yes - ..... If the A1 is not a trunk road there may be lots of other areas which - ? - " (Mr. Janes) "There are sections of trunk roads which lie within county boroughs and they generally become principal roads within county boroughs. The extent to which these are important is gradually declining because more and more of them, and especially motorways bypass county boroughs."

  (Chairman) "We have a similar situation in my constituency. It is an understood thing, I would have thought."

Also, for instance, referring to recommendations contained in the Merseyside Area Landuse Transportation Study (MALTS), of a total of £287 million for recommended highway schemes, £20 million was for trunk roads, £4.7 million was for non-principal roads and the rest was for principal roads.[9] Of the £20 million for trunk roads, less than £1 million was for trunk roads proposed within county boroughs and thus counting towards the cost of transport provided for these areas.

Road budget in London: A difficulty as to whether London should be counted as a county or a county borough arises in the formation of Figure 7.03 (table). The highway network within the Greater London area consists of a significant amount of trunk roads and a larger number of principal roads. Therefore in Figure 7.03, highways expenditure in London could have been added to equivalent figures for the rest of the county councils in England and Wales. However, the roads in London had an actual to planned expenditure ratio substantially lower than that for roads in other county councils. The combin ation of London's road expenditure with that of other county councils would have thus prevented a fuller appreciation of the actual to planned expenditure ratio for the county councils outside London. Therefore the planned and actual expenditure in London is first removed before the remaining budget is shared between county boroughs and counties according to their working population.

The major road programme for London is also estimated on the basis of working population (see Figure 7.04 - table)
An estimate was also made of the trunk road programme from details of schemes in Greater London administrative area contained in the 1000-mile motorway programme and associated trunk road network.

FIGURE 7.04 (Table)

AN ESTIMATE OF THE HIGHWAYS PROGRAMME FOR GREATER LONDON 1965/66 TO 1973/74 (1966/67 price basis)

i. Trunk and motorway programme in London for the period 1965/66 to 1973/74 = £67 million

ii. Total planned expenditure for major road construction in England and Wales - 1965/66 to 1973/74 = £2155 - £2550 million

iii. Working population in London as a proportion of working population in England and Wales =

$$\frac{4}{(6.1 + 4.0 + 11.3)} \times 100 = 18.7 \text{ percent}$$

iv. Total planned expenditure for major road construction in London - 1965/66 to 1973/74 = 18.7% of £2155 £2550 = £403 - £477 million

v. Total planned expenditure for NON-TRUNK, major road construction and improvement in London for the period 1965/66 to 1973/74 = £(403 less 67) to £(477 less 67) million = £336 - £410 million

With reference to Fig. 7.04 (table) , it is worth noting that in November 1967, the Greater London Council announced a road plan (essentially similar to Plan 3 of the London Transportation Study) for the period 1966/67 to 1981/82 estimated to cost £1350 million including commitments.[10] However, they did not release any phasing of this expenditure. In the event, the following calculation (see Fig. 7.05 - table) is completed to show that the calculations in Fig. 7.04 (table) above are in the right order of magnitude compared with the 1967 plans of the Greater London Council.

FIGURE 7.05 (table)

AN ESTIMATE OF THE HIGHWAYS PROGRAMME FOR GREATER LONDON 1965/66 TO 1973/74 BASED ON PLANS RELEASED BY G.L.C. ON NOVEMBER, 1967

i. Cost of major road construction and improvement plans for 1967/68 to 1981/82 (including commitments) released by the Greater London Council on November 1967 (1967/68 price basis) = £1350 million

ii. Estimated cost of the single major trunk road programme (the Outer London Orbital Motorway) contained in the 1967 programme but not in the 1000-mile trunk road programme referred to in Fig. 7.05 (table) = £ 450 million

iii. Balance for other major road construction for 16 years from 1967/68 = £ 900 million

iv. Budget for a 9 year period (similar to the period 1965/66 to 1973/74) on a pro-rata basis = £900 x $\frac{9}{16}$ = £ 506 million

= £482 million in 1966/67 price basis which compares with my estimate of £403-£477 million in Fig. 7.05.

Calculation of expenditure in Fig. 7.04 (table): Actual expenditures on highway construction and major road improvements was calculated from information supplied in the annual publication "Highway Statistics".[11] In this publication the information is given in terms of individual local authorities. I have accumulated this information by type of local authorities for the period 1965/66 to 1973/74. For accumulation over the period, the published values were converted to 1966/67 price basis using the road construction price indices (RCPI) given in Fig. 4.01 (table) of this thesis.

7.3 COMPARISON OF BUDGETS AND EXPENDITURES

Figure 7.03 (table)-page 8, gives the actual and budgeted cumulative expenditures for the period 1965/66 to 1973/74.

7.3.1 Trunk Road Programme :

The 1000-mile motorway programme was announced in 1960 for completion by the early seventies.[12] It was estimated in Fig. 7.01 (table) that the intention was to complete this programme by about 1973/74. However the programme was substantially completed ahead of time in 1971/72. The exceptionally fine summer of 1970 was one of the contributing factors for this early completion.[13] In relation to this fine summer, the Minister said that,

"The probability of this happening was realised quite early in the year, but it was decided not to disrupt the sensible programming of road schemes merely to ensure strict conformity with annual estimates."

The effect of that fine summer weather is however not reflected in the principal road programme. The total expenditure on principal roads in 1970/71 was £129 million which is not substantially different from the respective expenditures in 1969/70 and 1971/72 of £116 million and £126 million.

7.3.2 Principal Road Programme - HYPOTHESIS ONE:

The principal road programme for the period 1965/66 to 1973/74 amounted to nearly the same as the trunk road programme (see Fig. 7.03: table, last two rows). Of the principal road capital expenditure, 75 percent was to be paid as a specific grant by the Government while the balance was financed by local authorities from other sources. Evidence is provided below for hypothesis one which states that,

HYPOTHESIS I : Reductions in Exchequer grant assistance was NOT a substantial reason for the low implementation of urban transport plans.

An indirect evidence for this hypothesis was already provided in the last sub-section (7.3.1) where it was shown that financial resources to support the construction of trunk roads, even in excess of the budgeted programme was made available when necessary and that the 1000-mile motorway programme was finished earlier than anticipated.

The total principal road programme for the period 1965/66 to 1973/74 was estimated to be in the region of £1030 to £1320 million. The cumulative expenditure for this period on new construction and improvement of principal roads was £963 million, 73-93 percent of the programmed expenditure. The above measure of implementation indicates that budgetory provisions made for principal road grant assistance was substantially spent for this purpose. However, the principal roads programmed for construction in Greater London and the county borough areas achieved a low measure of implementation (see Fig. 7.04: table) while the principal road proposals in county council areas, not contained in the long term programme greatly benefited from the principal road grant assistance. In the rest of this section, evidence is provided to show that,

"the Minister of transport consistently encouraged the county borough authorities to apply for the principal road grants but the encouragement resulted in poor response"

while in the next section (§ 7.4) evidence is provided to show that,

"grants ear-marked for the provision of urban roads and subsequently NOT taken up by the county borough authorities were spent in the seventies for the provision of inter-urban (rural) roads."

Evidence of Minister's encouragement and poor response by county boroughs: In the early sixties, the Ministry of Transport appreciated the need for landuse-transportation studies as a fundamental aid to urban-planning in London, the conurbations and the larger free-standing towns.[14] Results of these studies were to be directly incorporated in a new type of urban development plan. An important function of this development plan was the identification of "action areas", that is to say of those areas where large scale activity would be concentrated in the next ten years. It was intended by the Government that this process would help the programming of urban road schemes by phasing them with urban redevelopment, to occur simultaneously.

Also, the Ministry of Transport met half the cost of transportation studies and supplemented the five year rolling programme for principal roads with a preparation list to receive the major urban road programme planned for commitment during the early years of the 1970s.[15] This urban principal road preparation list was planned eventually to contain £1,000 million worth of schemes.

The object of the arrangements described in the last two paragraphs was,

"..... to provide greater flexibility in planning and to stimulate the timely and thorough preparation of large and complex urban road schemes."[16]

The following statement made by the Minister in 1967 clearly indicates that he was fully aware of the slow rate of consumption of the allocated road funds.

"An increasing proportion of the programme is being devoted to urban roads[17] ..... It is envisaged that the schemes in the preparation list will be included in the programme in time for a start within a period of some five to eight years (at the outside) from 1971 ..... Much earlier starts will be possible for schemes fully prepared more quickly while any schemes not ready within the eight year period may loose their place in the programme so that other high-priority schemes which are ready to start can be included."

In 1969, the Minister reaffirmed his intentions to devote additional funds for the urban highway construction programme. He stated that,

"Over recent years, an increasing proportion of highway funds has been allocated to inter-urban roads.[18] ..... The benefits obtainable from these inter-urban roads will not be fully utilised unless there is a complementary system of improved urban highways. But the main purpose of the urban road programme is to alleviate traffic congestion, which is likely to spread more widely to all parts of the urban areas as a result of increasing car ownership. Congestion entails serious loss of economic benefit; it is also detrimental to the social amenity of urban areas; an extensive programme of road building is essential if this congestion is to be contained ..... In the future an increasing proportion of Road Programme will be devoted to urban principal roads."

Even when the road schemes prepared for a town did not command local support, the Government departments were willing to retain for some years, the allocation of the highway grants for a City. For instance, the Department of the Environment encouraged the Nottingham City Council to submit new road schemes when schemes contained in Nottingham's Primary Highway Plan failed to gain[19] Minister's approval at the Planning Inquiry after the combined resistance of the Civic Society, the Chamber of Commerce and other local pressure groups.

Notwithstanding this background of past encouragement, by 1970, the Minister of Transport first accepted that sufficient progress was not being made in the provision of urban highways. In the 1969/70 issue of the "Roads in England", the Minister referring to urban principal road schemes stated that,

"The timing of each scheme will depend on the state of readiness, cost, and benefits and the level of resources available, but construction schemes selected for the preparation list is expected to start during the 5 to 8 year period beginning in 1971, although recent experience suggests that these urban road schemes will take longer to prepare than originally envisaged[20] ..... There are about £1100 million worth of urban principal road schemes in preparation."

Additionally, in March 1970, a list of inter-urban (rural) principal roads was announced for preparation.[21] This preparation list, the first of its kind, was compiled from proposals put forward by local highway authorities from all parts of the country. The total estimated cost of the schemes, including some already in preparation was £100 million. A further £100 million of inter-urban principal road schemes were already in the FIRM PROGRAMME by that time.

After nearly a decade of encouragement by the Government to persuade the urban authorities to claim their highway grants, the introduction of the INTER-URBAN (rural) preparation list was the Ministry's safeguard to ensure that urban highway funds not taken up could be spent elsewhere to help highway construction. This last statement will be substantiated in section 7.4.

Irrespective of the formation of an inter-urban principal road preparation list, encouragement to take-up the URBAN highway grants was still forthcoming from the Ministry. In referring to the PRINCIPAL ROAD PREPARATION LIST (this was formed in 1971 by combinding the URBAN ROAD and the INTER-URBAN PRINCIPAL ROAD preparation list) the Ministry of Transport reiterated in 1971/72, that expenditure would be concentrated in urban schemes and that at least 80 percent of the schemes would be in urban areas.[22]

Also provisions were taken by the Highways Act 1971 to reduce procedural delays and to extend the powers of highway authorities in providing new roads.[23]

The theme of encouragement was continued until the local government re-organisation in April 1974.[24] In 1973, the year before the re-organisation it was reported in "Roads in England" that,

"The Secretary of State is directly responsible for trunk road schemes[25] ..... But increasingly all roads have to be seen as contributing to one system of movement. It remains for local authorities to take the initiative in promoting principal road schemes."

An overall change in National policies regarding local road construction did not take place until 1975 when the Labour Party was in control of the Government. A consultation document to review the Government's Transport Policy was issued in April 1976.[26] In that year, the Secretary of State's advice to the new local authorities in relation to road building was,

"..... to make the best use of existing road facilities especially in the conurbations and large towns."

It is unlikely that the outcome would have been substantially different from the present even if the National Policy during the late seventies would have been to encourage urban highway construction. Soon after Local Government Re-organisation in 1974, the new County Councils reviewed their "Inherited Road Schemes." The result of these reviews have been to delete a large number of schemes inherited from the former county borough authorities. For instance, the Greater Manchester Council (GMC) reported that,

"In the relatively short space of time, GMC has, assuming all the schemes now the subject of consultations are eventually abandoned, reduced the value of its inherited schemes from £810 million to £365 million.[27] Work being undertaken at the present time is likely to reduce this further. As a consequence the blight being caused by protecting schemes which have no hope of being implemented in the forseeable future has been considerably reduced with benefits for areas and properties so affected."

7.4 TRANSFER OF FUNDS FROM URBAN TO RURAL ROAD CONSTRUCTION

Inter-urban (rural) roads in this respect are mostly trunk and principal roads. As agents to the Minister of Transport, the County Councils greatly influence the provision and maintenance of trunk roads. Prior to the re-organisation they were the highway authorities for principal roads in rural areas. Since the re-organisation the county councils are the highway authorities for the former county borough areas contained within the county council's administrative areas.[28]

7.4.1 Transfers to trunk road lists

The 1000-mile motorway programme was completed, with the projects almost as planned, by 1971/72 which is nearly two years ahead of the estimate of anticipated completion time. In Figure 7.03 (table) it is shown that the trunk road expenditure for the period 1965/66 to 1973/74 exceeded the planned expenditure by some 5 to 15 percent (£61 to £166 million). The completion of the 1000-mile motorway programme was followed by a second plan to provide for a steady expansion of the scale of the road programme to complete a network of 3,500 miles of high standard strategic trunk routes of which about 2000 miles will be motorways. Opportunity was taken in this plan to provide as trunk roads a selection of schemes recommended in earlier transportation studies for completion as urban principal roads. Figure 7.06 illustrates these transfers from principal to trunk road list that took place in Stockport, contained in the S.E.L.N.E.C. Highway Plan.

The public inquiry for a section of the M63 trunk road between Cheadle Heath and Portwood was held in 1978. This proposal was initially recommended in the S.E.L.N.E.C. Highway Plan as the Stockport East-West Bypass - principal road, to be provided by Stockport County Borough Council.[29] The principal objectors at the above inquiry were the Greater Manchester Transport Action Group and the Friends of the Earth. The objectors claimed at the inquiry that,

"..... to substantiate their traffic forecasts, the RCU (North Western Road Construction Unit) produced an origin-destination survey carried out in 1976 for the Regional Traffic Model. Examination of this revealed that 74 percent of the west-bound traffic east of Stockport had the destination in Stockport and that through national or regional traffic from the East amounted to 154 VPD (vehicles per day) - 1 percent of the total trips. There seems to be no doubt that the Government decided to take over this section of the A560 road as a trunk road without investigating the extent of use by national through traffic. It is, to say the least, questionnable for the Secretary of State to use the power delegated by Parliament to extend, improve or re-organise the national system of routes for through traffic to construct a new road with such limited use for through traffic."

7.4.2 Transfer of funds to provide rural principal roads:

The Principal Road Preparation List, during 1971 contained £2000 million worth of road schemes in preparation of which nearly 80 percent were in urban areas. In Figure 7.06 (table) the planned expenditure as described above, for the provision of inter-urban and urban principal roads, is compared with the out-turn.

From the above comparison, it appears that county councils made use of, at least £38 million in excess of what was planred during 1970, for the provision of rural principal roads during the period 1970 to 1974 while the urban road budget was being underspent.

The public inquiry for a section of the M63 trunk road between Cheadle Heath and Portwood was held in 1978. This proposal was initially recommended in the S.E.L.N.E.C. Highway Plan as the Stockport East-West Bypass - principal road, to be provided by Stockport County Borough Council.[29] The principal objectors at the above inquiry were the Greater Manchester Transport Action Group and the Friends of the Earth. The objectors claimed at the inquiry that,

"..... to substantiate their traffic forecasts, the RCU (North Western Road Construction Unit) produced an origin-destination survey carried out in 1976 for the Regional Traffic Model. Examination of this revealed that 74 percent of the west-bound traffic east of Stockport had the destination in Stockport and that through national or regional traffic from the East amounted to 154 VPD (vehicles per day) - 1 percent of the total trips. There seems to be no doubt that the Government decided to take over this section of the A560 road as a trunk road without investigating the extent of use by national through traffic. It is, to say the least, questionnable for the Secretary of State to use the power delegated by Parliament to extend, improve or re-organise the national system of routes for through traffic to construct a new road with such limited use for through traffic."

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FIGURE 7.06 (table)

COMPARISON OF PLANNED & OUT-TURN EXPENDITURES - 1970/71 TO 1973/74 (4 YEARS) INTER-URBAN (RURAL) PRINCIPAL ROADS BY COUNTY COUNCILS AND URBAN PRINCIPAL ROADS BY COUNTY BOROUGH COUNCILS - ENGLAND & WALES

1966/67 PRICE BASIS - £ MILLION

		PLANNED EXPENDITURE	OUT-TURN
1.	Value of principal road expenditure planned and out-turn for an 8 year period from 1970/71 = (Note: (i) £2000 million in 1970 price basis (of which nearly 80% was planned to be in urban areas) = £ 1612 in 1966/ 67 price basis (ii) The out-turn expenditures are based on information provided in "Highway Statistics"	1612	—
	OF WHICH		
2.	Value of principal road expenditure planned for the 4 year period 1970/71 to 1973/74 on a pro-rata basis and out-turn =	806	394
	OF WHICH		
3.	Value of rural principal road expenditure planned and out-turn (Note: (i) Expenditure by county councils excluding Greater London Council on principal roads is assumed to be on rural principal roads	161	199
	AND		
4.	Value of urban principal road expenditure planned and out-turn	645	195
	OF WHICH		

Contd.

FIGURE 7.06 (table)
contd.

		PLANNED EXPENDITURE	OUT-TURN
5.	Value of Greater London Council's major road construction improvements planned and out-turn (i: G.L.C.'s planned expenditure is assumed to be in proportion to the working population, i.e. the total urban principal road programme is divided in the ratio of 4.1 : 6.0 which were the working population in G.L.C. and county borough areas in England and Wales during the 1966 Census)	262	57

7.5 CONCLUSION

During the early sixties, the Ministry of Transport proposed a 1000-mile motorway programme for England and Wales for completion by early seventies. This plan was implemented successfully.

In urban areas, particularly the conurbations and larger free-standing towns, the Ministry was willing to provide grant assistance for an extensive programme of road construction. However, despite consistent encouragement by the Minister, the county borough councils who were the highway authorities for most of these urban roads, failed to promote the schemes. In the event, the capital grant allocations that were ear-marked by the Ministry for the provision of major urban roads was largely spent during the seventies on the provision of inter-urban trunk and principal roads. Therefore, central Government shortage of funds was not a prime reason for the low implementation of urban transport plans.

7.6 NOTES : CHAPTER SEVEN

1. For details of transport grants available, refer to Chapter 2 of this thesis; specially pp. 3-5, 15-16, 21 and 24-25.

2. Chancellor of the Exchequer (July 1965)
NATIONAL EXPENDITURE PLANS: CMND
London, H.M.S.O.; p.

3. The Environment and Home Office Sub-Committee (14 Dec. 1972)
URBAN TRANSPORT PLANNING - VOLUME II - MINUTES OF EVIDENCE
London, H.M.S.O; p. 457

4. Scott Wilson Kirkpatrick and Partners (Dec. 1968)
OXFORD CENTRAL AREA STUDY
London, 5 Winsley Street, Scott Wilson Kirkpatrick and Partners, pp.

5. Minister of Transport (March 1965) ROADS IN ENGLAND AND WALES
H.C. REPORT 346
London, H.M.S.O; p. 12

6. Ibid; pp. 16-17

7. Central Statistical Office (1969) REGIONAL STATISTICS
London, H.M.S.O;

8. URBAN TRANSPORT PLANNING
op.cit. p.18

9. Traffic Research Corporation (June 1969)
MERSEYSIDE AREA LANDUSE TRANSPORTATION STUDY
Liverpool

10. Greater London Council (21st Nov. 1967) MINUTES AND PROCEEDINGS
London, County Hall; pp. 694-700

11. Ministry of Transport: HIGHWAY STATISTICS
Published annually, these publications give expenditure details and related statistics for roads in Great Britain. Since 1974, this series has been enlarged to cover all transport related expenditures and is published annually as
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London, H.M.S.O.

12. ROADS IN ENGLAND AND WALES (1965)
op.cit. pp. 12 & 66

13. Minister of Transport (1973) ROADS IN ENGLAND 1971/72: HC 62
London, H.M.S.O; p.2

14. ROADS IN ENGLAND AND WALES (1965)
op.cit. pp. 15-16

15. Ibid; p.17 & 21

16. Ibid; p. 16-17

17. Minister of Transport (1969) ROADS IN ENGLAND 1967/68: HC
London; H.M.S.O; p.

18. Minister of Transport (1971) ROADS IN ENGLAND - 1968/69: HC 138
London, H.M.S.O; p.

19. Grant, J. (1977) THE POLITICS OF POLICY MAKING
London, Earth Resources Research Ltd; p. 80

20. Minister of Transport (1971) ROADS IN ENGLAND 1969/70: HC 138
London, H.M.S.O; p. 14

21. Ibid; p. 14

22. Minister of Transport (1973) ROADS IN ENGLAND 1971/72: HC 62
London, H.M.S.O; p.

23. Secretary of State for the Environment (1972) ROADS IN ENGLAND 1971: HC 74
London, H.M.S.O; p. 3

24. For a summary of the Highways Act 1971, refer to chapter 2 of this thesis; p. 2.20

25. Secretary of State for the Environment (1974) ROADS IN ENGLAND 1972/73: HC 152
London, H.M.S.O; p. 2

26. Secretary of State for the Environment (1976) ROADS IN ENGLAND 1975/76
London, H.M.S.O; p. 3

27. Greater Manchester Metropolitan Council (1976)
TRANSPORTATION POLICIES AND PROGRAMMES
Manchester, Chief Executive's Department, Greater Manchester Metropolitan Council

28. For changes that occurred in transport policies due to re-organisation, refer to chapter 2 of this thesis; pp. 2.23 - 2.25

29. TRANSPORT REPORT (March 1978) London, Transport 2000; p 3

CHAPTER EIGHT

EFFECT OF CHANGING VALUE SYSTEMS (AS MANIFEST IN NATIONAL POLITICAL AND PRESSURE GROUPS) ON IMPLEMENTATION

* * *

* * *

Several Royal Commission and Parliamentary Committee Reports were published and Bills affecting transport provisions were enacted within the last two decades.[1] The chief means for pressure groups to lobby at national level are by submission of evidence at Commissions and Committees before a bill is drafted or during the time it is in Committee.[2] Lobbies will normally agitate for certain measures to be introduced to favour their interests or clauses harmful to their interests to be deleted.

In this chapter, the following hypothesis are examined and found to be on balance supported by the available evidence.

HYPOTHESIS I: National pressure groups greatly influenced the contents of transport legislation enacted in the period from 1962 to 1975.

HYPOTHESIS II: Policy changes won by national public transport pressure groups were used until the mid-seventies only to a limited extent to produce alternatives to traditional solutions based on road construction.
Alternative solutions introduced did NOT greatly affect the implementation of traditional plans in urban areas, at least until the mid-seventies.

Prior to examination of the above hypotheses, it is necessary to look into the stance adopted by the two major political parties and the public at large on the issue of large scale urban road provision.

8.1 POLITICAL AND PUBLIC RESPONSE IN THE SIXTIES

We begin with an analysis of the situation before the enactment of Transport Act 1968. Prior to this enactment, highway construction and improvements were supported from public funds while public transport provisions attracted little public finance. Highway construction had the support of all major political parties.

8.1.1 Political response:

Roy Gunter, in 1964, on behalf of the Labour Party declared that,

"I hope we shall look into the future and ensure that those who own private cars - everybody has a right to a private car, if he wants it - are properly and adequately dealt with on the roads."[3]

In 1966, Peter Walker, on behalf of the Conservative Party asserted similar views when he said that,

"You must see the car as an important social development bringing much pleasure to many people, so you must pursue an active policy to cope with it not a negative attitude."[4]

Edward Heath, in the same year re-iterated Walker's assertion,

"Some people would like to push us into a frame of mind which it is considered anti-social to own a car, selfish to drive one; and positively sinful to take it into built-up areas.[5] Of course traffic in towns create a problem ..... My approach to this problem is not to restrict, to hamper or to confine the motorist. Instead, we must learn to cope with the car and to care for the motorist."[5]

Even as recently as 1970, Anthony Crossland answered unambiguously for Labour,

"It would be profoundly anti-democratic for any government to be straight anti-motorcar or to try to limit the number of cars ..... The better off classes must not give the impression that they are trying to pull the ladder up behind them."

In this respect it is also worth noting that already evidence has been provided in Chapter seven to show that successive Central Governments, irrespective of their controlling party, have encouraged urban road building until at least the mid-seventies. During the period under consideration, the Labour party was in Government for the period 1964 to 1970 and then returned to power in February 1974. The Conservative party was in power from 1970 to 1974.

8.1.2 Public response

During the sixties, public response to highway programmes were of general acceptance, indeed welcome of the schemes.[6] The need for road schemes was taken as policy and not for argument at an Inquiry.[7] Economic and traffic engineering arguments were barely canvassed by objectors. Public inquiries - if there were sufficient objections, would take only a few days. Objectors were nearly always the people directly affected. An official spokesman explained the scheme and answered questions raised by the objectors. The emphasis was on informality.

Both the British Road Federation and the anti-road lobbies are agreed that it is only since the mid-seventies that it has taken an inordinate time to consider the various issues involved in road schemes.[8] In a statement prepared by the British Road Federation and released by the Transport 2000 in 1980 it is stated that,

"..... the first motorway scheme, the M6 Preston Bypass, took five and a half years to plan and build, the M180 Scunthorpe bypass took eight and a half years from 1971 to completion, and the A12-A13 section of the M25 will take 13 years from inception in 1969 before it opens in 1982.[9]

Clearly, many of the objectors have a legitimate local interest but their activities do not usually cause undue delay. It is the action of some of the national groups that cause unwarranted delay."

8.2 HISTORY OF NATIONAL TRANSPORT PRESSURE GROUPS

The note above identified the following anti-road lobbies as particularly active in opposing roads and the vehicle - Transport 2000, Conservation Society, Friends of the Earth and the Civic Trust. The Trade Union Congress has also played a major role in safeguarding the interests of public transport workers.

The most powerful road lobbies in U.K. are the British Road Federation (BRF) and its two allied organisations the Roads Campaign Council (RCC) and the British Industry Roads Campaign (BIRC).[10] BRF is actively supported by kindred interest groups including the Automobile Association (AA), the Royal Automobile Club (RAC), the Road Haulage Association (RHA), Asphalt and Coated Macadam Association (ACMA), Motor Agents Association (MAA) and the Society of Motor Manufacturers and Traders (SMMT).

8.2.1 British Road Federation

The British Road Federation (BRF) was founded in 1932 to represent the road transport interests of vehicle manufacturers, construction companies and their suppliers of materials and machinery including the oil companies and a significant part of British Manufacturing Industry and Commerce in their role as road users. The Federation has created two allied organisations, the Roads Campaign Council in 1955 and the British Industry Roads Campaign in 1970. The three organisations together are dubbed as "The Road Gang" and have been identified during the sixties by Mrs. Barbara Castle and other members of parliament as the most vociferous lobby in the country.

At urban level, the main policy objective of BRF and its allies is the establishment of an estimated 1000 miles of primary road network in the conurbations and cities.[11] The lobby for this purpose is essentially based on the development of informal social contacts and the subsequent briefing of local members of parliament, councillors and their officers. The Federation also provides with statistical evidence and other information to support their claims.

In the sixties, when the tradition of representative government was strong and public involvement was only sporadic, the Federation's efforts paid handsome dividends, especially in the provision of inter-urban (rural) roads.[12]

BRF is currently concerned at the lack of progress in building urban motorways. With its centrally organised structure, the Federation is at a disadvantage to resist the present day environmental lobbies with a strong network of local organisations. It now has formed local branches to present their cases locally in the conurbations and other towns.

8.2.2 Transport 2000

Transport 2000 was formed in 1973 and include in its members several cause groups such as the Civic Trust, Conservation Society, Council for the Protection of Rural Environment and Friends of the Earth and interest groups such as the National Union of Railwaymen, Scottish Association of Public Transport and the Transport and Salaried Staff Association.[13] Its aims are declared as:

(i) To relate transport use and planning to the principles of social equity; the protection of environment and the more efficient use of resources.

(ii) To pursue the development and promotion of rail transport within an integrated transport system.

(iii) To press for a comprehensive and long term approach to transport by the Government and the E.E.C.

(iv) To promote public discussion and participation in the provision of transport services.

It has 24 divisional groups, each of them relating to a group of administrative counties - for instance, the Thames Valley Group covers the Berkshire, Buckinghamshire and Oxfordshire areas, each divisional group having several sub-groups.[14,15]

Their activities at local level include representing their cause at development plan and highway inquiries and organising campaigns in favour of pedestrians, cyclists and public transport users.

8.2.3 Friends of the Earth Ltd:

Friends of the Earth Ltd. (FOE) is an independent British member, founded in 1970, of a family of 12 environmental activist groups.[16] It has 100 local groups in Britain, with whose help it pursues specific campaigns which in the transport field are aimed towards the greater use of public transport as a means to use energy and other resources efficiently. It is closely associated with Earth Resources Research Ltd., a London based environmental research agency which was established in 1973.

8.2.4 Civic Trust:

Founded in 1957, the Civic Trust encourages the protection and improvement of the environment, particularly in towns, cities and villages.[17] It supports at present a network of nearly 1400 civic and 15 preservation societies which are voluntary bodies with a total membership of more than 300,000.

At national level, the Civic Trust was closely associated with the drafting of the Civic Amenities Act 1967 and the Town and Country Planning Amenities Act 1974.[18] The 1967 Act created the concept of conservation areas while the 1974 Act gave further protection to such areas. The Trust lays claim to focussing attention on the damage and disruption caused to city centres by heavy lorries.[19]

In the sixties, it supported in principle, the provision of ring roads to remove through traffic from urban areas. For instance, it supported the principle of an inner ring road for the City of York, to reduce traffic from the conservation areas. In 1968, it organised a study group, to justify a longer but less intrusive inner ring road for St. Ives.[20,21] Subsequent knowledge and experience together with changing climate of public opinion have persuaded the Trust, in the mid-seventies to favour a public transport based policy as more likely to save the urban environment.

8.3 TRANSPORT LEGISLATION AND THE NATIONAL LOBBIES

In this section, evidence is presented to support the first hypothesis that,

HYPOTHESIS I : National pressure groups greatly influenced the contents of transport legislation enacted in the period from 1962 to 1975.

8.3.1 Influence of pressure groups on the production of "Buchanan Report"

One of the first to echo professional concern on the destructive effect of the car on the community was Colin Buchanan. But it should also be noted that the present day anti-road lobbies brand his work - 'Traffic in Towns', which introduced the principle of urban transportation studies officially in U.K. as a road-builders' charter.[22]

"Traffic in Towns" steering group, chaired by Crowther and the working group chaired by Buchanan worked on the assumption that,

"Before very long, a majority of the electors in this country will be car-owners. What is more it is reasonable to suppose that they will be very conscious of their interests as car-owners and will give them a high priority. It does not need any gift of prophecy to foresee that the Governments of the future will be increasingly preoccupied with the wishes of the car-owners."[23]

The above view is in accord with those of the pressure groups who provided technical assistance in the production of the report.[24] Amongst the pressure groups acknowledged in this respect are the Automobile Manufacturers Association (U.S.A.) and the British Road Federation. No prominent anti-road lobby existed when "Traffic in Towns" was published.

The Buchanan Report was adopted by the Ministry as the basis for future transport planning and was recommended to local authorities in January 1964.[25] The British Road Federation conducted its own publicity campaign to,

"give the widest possible circulation to the principles of the Buchanan Report, and to drive home its lessons."[26]

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For instance it published an abridged version of the Buchanan Report called "Buchanan and After" and held a number of exhibitions on the subject to introduce the Buchanan Report to local highway authorities.[27]

Of particular interest is the "People and Cities" conference held by BRF in 1963 to introduce the subject of urban motorways to the more prominent politicians and planners. Buchanan was the principal speaker at the conference which was opened by the then Minister of Transport, Mr Marples. BRF later released in its conference report a statement made by Buchanan to the Federation's Chairman.[28]

> "It's all very well, I've written my book, you've had your conference; what we have to do is keep up a full head of steam and see that the pressure which has been generated is kept up until we get results."

8.3.2 Influence on the enactment of Transport Act 1968

One of the powerful self-interest lobbies, the Trades Union Congress (TUC) was the first to be critical of the Buchanan assumptions, relating to the implications of the growth of private motoring, particularly in urban areas. The Congress did not believe in the inevitability of the growth. In the "Transport Policy", issued in 1965 they agreed that,

> "Traffic flow can be influenced by public policy and in particular by how much is spent on road construction ..... It will become more and more evident that the bus industry needs a general SUBSIDY as car ownership increases and no section of the industry operating fare-stage services should remain in the CONTROL OF PRIVATE SHAREHOLDERS. The first move in the direction of a general subsidy was made in the November Budget of 1964." (my capitals)[29]

Section 96 of the TUC's Transport Policy called for the physical co-ordination of passenger transport. They agreed that,

> "there is a wide range of opportunities for IMPROVING the quality of the PUBLIC TRANSPORT service and making it more attractive to the public if the various AGENCIES can be persuaded TO WORK MORE CLOSELY together ..... the situation demands that such scheme be SUPERVISED BY AREA AUTHORITIES." (my capitals)

Provisions to the above effects were subsequently introduced by the Labour Government in the 1968 Transport Act. It contained the following main elements in the urban field.[30] Firstly, it introduced financial reforms to eliminate bias against public transport expenditure - both capital and current. Secondly, there was the creation of passenger transport authorities (PTA's) to co-ordinate transport operations and the passenger transport executives to operate conurbation-wide public transport, under the general direction of the PTA. The National Bus Company was created to take over public transport operations from private operators from outside the conurbations. Thirdly, the Act increased the planning powers of the local authorities to include traffic management measures as part of a comprehensive transport policy. The intention was to make public transport attractive by introducing measures such as bus-lanes. It is worth noting that in 1972 the Ministry introduced a number of bus-demonstration projects to encourage local authorities to adopt such measures.[31]

8.3.3 Influence on the enactments of highway legislation in early seventies:

"As a matter of urgency we (the Conservatives) shall REVIEW the entire working of the ROAD PLANNING LAND ACQUISITION AND CONSTRUCTION PROCEDURES." (my capitals)

The British Road Federation had this pre-election pledge in a letter from Edward Heath, and this and other extracts from the Prime Minister's reply to questions from the British Road Federation (BRF) Chairman, Lord Chesham, are reproduced in the BRF's July, 1970 Bulletin.[32]

"We shall undertake this review in consultation with the professional engineers and the contracting companies ..... We have always taken the view that the road programme was one which the county could not afford to cut. Under the Conservatives even when public expenditure had to be curtailed, road building continued to increase."

The Conservatives were elected to power in 1970. The pledges given to the BRF were fulfilled by the enactment of the Highways Act 1971 and the appointment of the Urban Motorways Committee in the same year.

The Highways Act 1971 reduced the maximum period, for lodging public objections, from three months to six weeks. The Act also required the objectors to include with the objections a statement of the grounds of objections. Objectors who wished to suggest an alternative route were required to give within 14 days sufficient information about the alternative route to enable it to be identified.[33]

Referring to the roads programme and the 1971 Act, Michael Heseltine, the then Parliamentary Under Secretary of State for the Environment stated that,

"There are politically overwhelming pressures to increase the (road) works programme in view of benefits to both commerce and amenity.[34] ..... A 55-yard centre line variation clause and reduction in periods for objection from three months to six weeks should help to get uncontroversial schemes through more quickly. ..... The road construction industry has an exciting future but people living in the line of the new roads deserve our uttermost compassion."

The Report of the Urban Motorways Committee resulted in the White Paper, "Compensation and Development - Putting People First" and subsequently to the Land Compensation Act 1973. The effect of the 1973 Act was to allow highway authorities to be more flexible than in the past in locating roads, particularly through built-up areas.[35]

8.3.4 Influence on the Environment and Home Office Sub-Committee on Urban Transport Planning:

A call for a national transport policy, an end to the urban roads programme plus an urgent re-examination of all trunk and principal road schemes not yet at contract stage was first made in the ALL PARTY, House of Commons Expenditure Committee report on urban transport planning, published in January 1973.[36]

The above recommendations resulted because of persuasive evidence given by environmental lobbies and passenger transport operators to that Committee. Even in this instance, the environmental case was argued on a personal basis by individuals such as Mayer Hillman and J.M. Thomson while the Association of Public Transport Operators made the plea on behalf of public transport.[37] None of the anti-road lobbies, which are presently widely publicised, gave evidence to the Committee.

The Surveyor commented on the publication of this Expenditure Committee Report as follows:

"The report is bound to spark a long debate on transportation, inside and outside the House of Commons.[39] It will clearly be seen as evidence of parliamentary support for the growing anti-road lobby. Just how much notice the Government will take of the recommendations, however, remains to be seen. The Committee is solely a parliamentary one, with no executive functions."

The recommendations of the Committee, particularly those relating to road construction, were not implemented by the Conservative government of the day.

8.3.5 Influence of national pressure groups during the mid-seventies

In February 1974, a National Motorways Action Committee was set up, with a steering committee consisting of representatives from anti-road lobbies such as Friends of the Earth and Transport 2000.[40]

During 1976 and 1977 a number of major trunk road inquiries, such as those at Airedale, Winchester and Archway, were challenged and disrupted by this Committee together with the Conservation Society led by John Tyme.[41] The publicity gained by such disruptions resulted in the Government publishing the "Report on the Review of Highway Inquiry Procedures" in 1978.[42]

The new Highway Inquiry Procedures allowed the anti-road lobbies a number of concessions of which the important ones are as follows:

(i) The Lord Chancellor and not the Secretary of State for Transport, as was the previous practice, will nominate the inspectors for road inquiries.

(ii) More and better information on the road proposals will be supplied to the objectors.

(iii) An opportunity will be given to participants who want to re-open an inquiry in the light of exceptionally new evidence or issues.[43]

In addition to the above review, the Secretary of State for Transport set-up an Advisory Committee on Trunk Road Assessment (ACTRA - Chairman: Sir George Leitch) to review the way the Department of Transport assessed the need for major new roads.[44] Report by ACTRA, also called the Leitch Report, was published in 1978.[45]

A number of anti-road lobbies and environmental groups submitted evidence which were highly critical of the Department of Transport's assesment procedures. The Leitch Report supported a large number of these criticisms. The Committee found the Department's methodology as crude and its vision of its job very narrow. The Leitch recommendations were substantially adopted by the Secretary of State for Transport, William Rodgers.[46]

The evidence given in this section support hypothesis 1 which states that national pressure groups greatly influenced the contents of transport legis lation enacted in the period from 1962 to 1975.

8.4 EFFECT OF POLICY CHANGES ON TRADITIONAL PLANS

In this section, evidence is provided for the second hypothesis which states that,

HYPOTHESIS II : The policy changes won by national pressure groups did NOT greatly affect the implementation of urban transport plans, at least until 1974

Considering the low rate measure of implementation, one can hardly say that the effect of the pro-roads lobby increased implementation. However, it could be that the rate measure of implementation was reduced by the successes of the public transport and environmental movements. The principal success prior to 1974 was the inclusion of power to subsidise public transport infrastructure in the 1968 Act.

Within the sample selected, only the two conurbation studies, M'LTS and the Tyne Wear Plan, contain any significant public transport infra-structure proposals as part of their recommended plans.

In MALTS only 6% of recommended expenditure was allocated for public transport infrastructure.[47] Moreover, highway expenditure in the plan was determined independently of public transport provisions, the former being largely based on capital finance availability as indicated by the Minstry of Transport, the unfulfilled transport needs being provided for by public transport.

A number of anti-road lobbies and environmental groups submitted evidence which were highly critical of the Department of Transport's assesment procedures. The Leitch Report supported a large number of these criticisms. The Committee found the Department's methodology as crude and its vision of its job very narrow. The Leitch recommendations were substantially adopted by the Secretary of State for Transport, William Rodgers.[46]

The evidence given in this section support hypothesis 1 which states that national pressure groups greatly influenced the contents of transport legis lation enacted in the period from 1962 to 1975.

8.4 EFFECT OF POLICY CHANGES ON TRADITIONAL PLANS

In this section, evidence is provided for the second hypothesis which states that,

HYPOTHESIS II : The policy changes won by national pressure groups did NOT greatly affect the implementation of urban transport plans, at least until 1974

Considering the low rate measure of implementation, one can hardly say that the effect of the pro-roads lobby increased implementation. However, it could be that the rate measure of implementation was reduced by the successes of the public transport and environmental movements. The principal success prior to 1974 was the inclusion of power to subsidise public transport infrastructure in the 1968 Act.

Within the sample selected, only the two conurbation studies, MALTS and the Tyne Wear Plan, contain any significant public transport infra-structure proposals as part of their recommended plans.

In MALTS only 6% of recommended expenditure was allocated for public transport infrastructure.[47] Moreover, highway expenditure in the plan was determined independently of public transport provisions, the former being largely based on capital finance availability as indicated by the Minstry of Transport, the unfulfilled transport needs being provided for by public transport.

In the Tyne Wear Plan, the recommended public transport infrastructure provisions was estimated to cost £21.0 million, representing about 10 percent of a total recommended transport capital expenditure.[48] However, it should be noted, that additional funds were promised by the Ministry of Transport in the case of this study to provide for a higher level of public transport.[49]

Therefore it is reasonable to conclude that public transport provisions contained in transport plans did not greatly affect the implementation of road plans.

It is sometimes claimed that after about 1972 when the Labour Party was swept into power in a large number of county borough councils, the existing road plans were rejected in favour of public transport and traffic management schemes.[50] The examples frequently quoted in these cases are those of the "Zone and Collar" scheme in Nottingham and the "Park and Ride" schemes in Oxford. However in both these cities, the recommended road plans were rejected at public inquiries and public transport and traffic management measures were introduced by the outgoing Conservative councils as interim measures.

8.5 CONCLUSION

During the sixties, national politicians and public alike supported road construction. In such a climate of opinion, road lobbies led by the British Road Federation were successful in meeting their objectives. The Trades Union Congress was the first lobby to persuade the Government to introduce measures in support of public transport. These provisions were used to a limited extent to produce alternatives to traditional road solutions. However these alternatives did not greatly affect the implementation of road plans. National anti-road and environmental lobbies were not responsible for the low implementation of plans prior to 1974; such influence as they have had have been more recent.

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CHAPTER NINE

EFFECT OF PREDICTIVE ACCURACY OF STUDIES ON THEIR IMPLEMENTATION

* * *

* * *

Opinion has been expressed by several people that errors in the assumptions about traffic demand, available resources, costs of provision and road performance significantly affected the implementation of transport plans.[1,2,3] The purpose of this chapter is to show that these errors were not significant as reasons for the low implementation of plans.

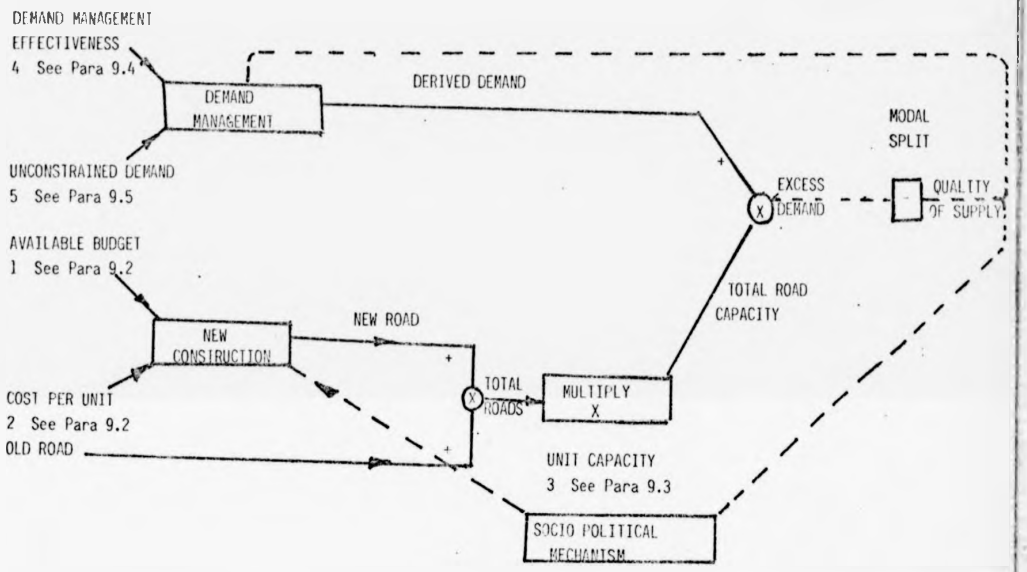
9.1 INPUTS TO TRANSPORT STUDIES

"We concluded since it is obviously the desire of the society to use the motor vehicle to the full, that the only practical basis for a study of the present kind was to accept this desire as the starting point."[4]

This concept first recognised by the Traffic in Towns (Buchanan Report) Working Party is the corner-stone of most transportation studies. The clearest exposition of this concept was given by Professor Buchanan in an article written in 1964.[5]

"We ... always returned to the view that the motor-vehicle is an incredibly useful method of transport, offering advantages possessed by no other invention to date nor, as far as we could see, by anything in the foreseeable future. This led to our "fundamental standpoint" of accepting the motor vehicle as beneficial and then seeking to understand, what needed to be done to cities in a creative and constructive way to enable it to be exploited within them. The case for restriction would have to emerge, we agreed, from the demonstrated impossibility or great difficulty or great expense, of meeting the full demand for the use of motor vehicles. I remain absolutely convinced this was a sound approach, and that had we started in any other way, our study would have carried no confidence with the public. I would expect any local authority studying the problems of its area to proceed broadly as we did, that is, to investigate how far, it is possible to go with the motor vehicle and to allow for the case for restriction to emerge in the negative 'feed back' manner described. There is nothing to prevent the local authority, at any stage, costing out alternative methods of discharging the movements, provided they can think of them. In practice, this is likely to boil down to one main issue - how much of the JOURNEY TO WORK load can be discharged by PRIVATE CARS and how much must be carried by PUBLIC TRANSPORT" [my capitals]

Fig. 9.02 is my interpretation of the above statement, as applied in transport planning.



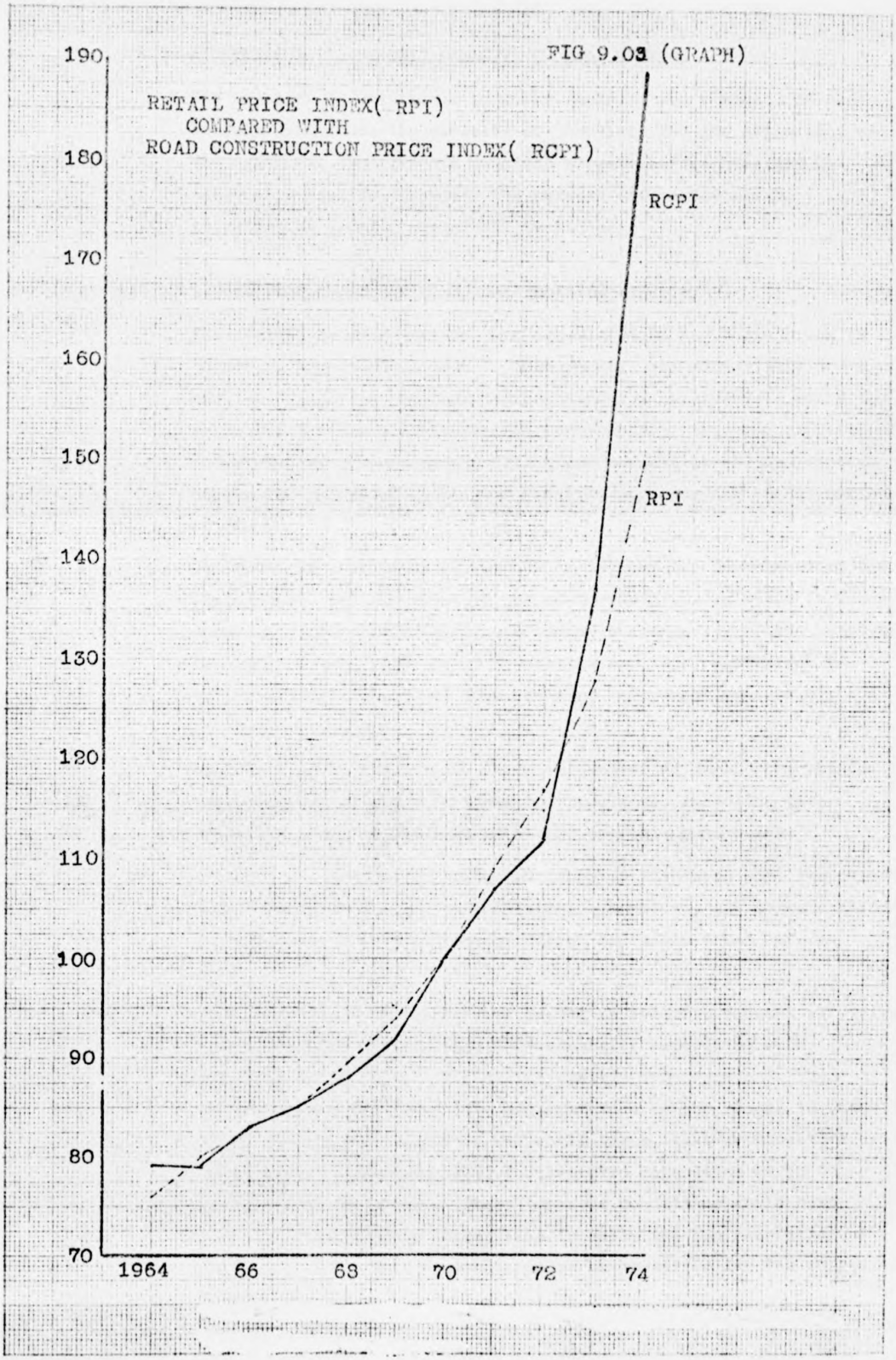
POLICY-MAKING IN URBAN TRANSPORT PLANNING : FIG 9.01

I will discuss, in sub-sections 9.2 to 9.5, the effect of variation in predicting the inputs on the implementation of plans, essentially new road construction.

9.2 ASSUMPTIONS ON AVAILABLE BUDGET AND COST PER UNIT OF ROAD CONSTRUCTION

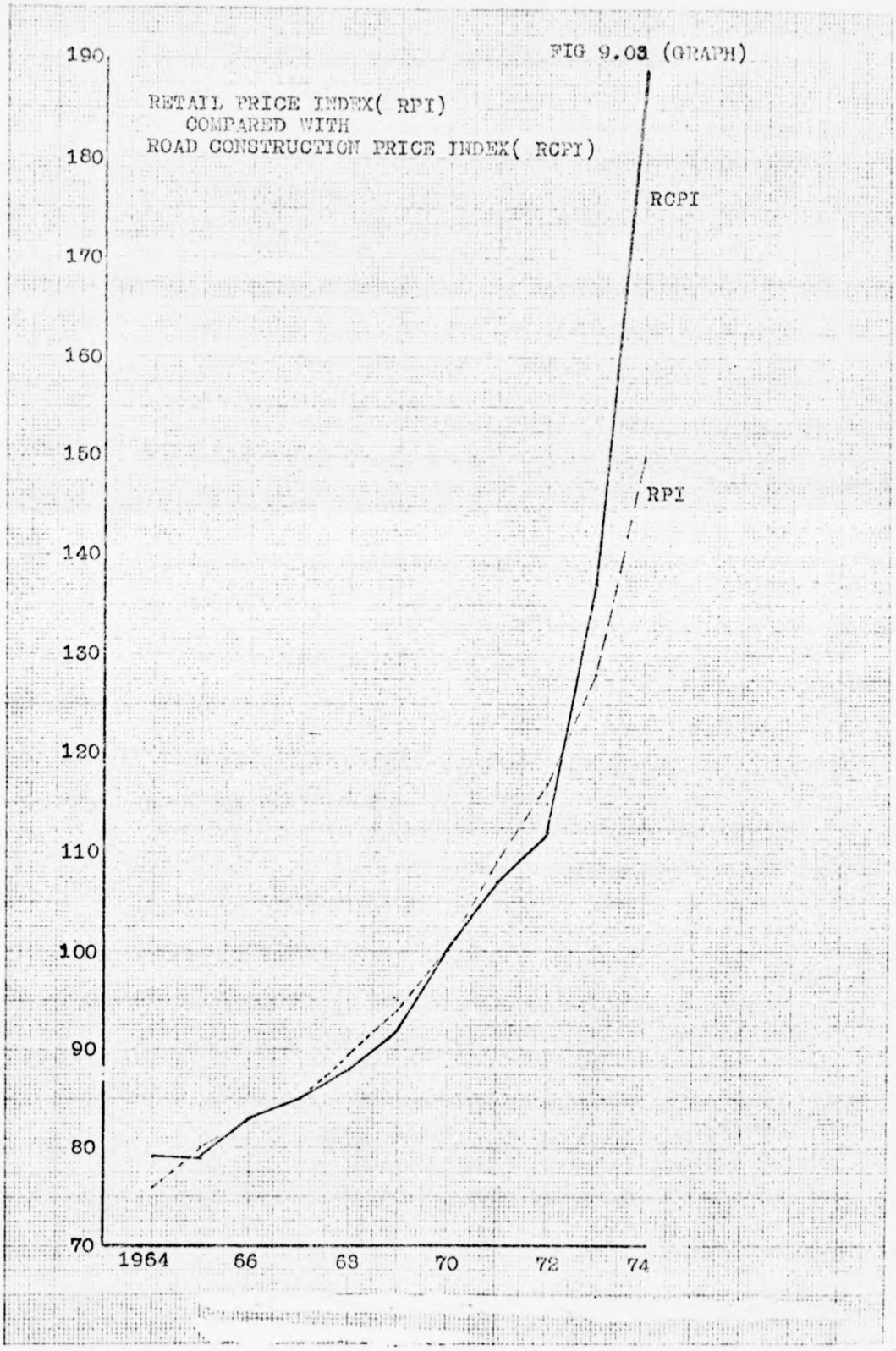
These two inputs directly determine the amount of new construction. The budget available for plan implementation is determined outside the transport planning process, essentially by the Central Government. I showed in chapter seven, that the budget was calculated on the basis of "£ per head (of worker) per annum." It was also shown (see Ch. 7) that lack of transport capital did not significantly affect the implementation of plans. "Cost per lane" of highway has remained fairly constant in real terms since the preparation of plans (see Fig. 9.03). Therefore we are justified in concluding that the errors in estimating the "new construction" that can be provided within the fixed budget did not significantly affect the implementation of plans.

FIG 9.03 (GRAPH)



Manjeet Press, Delhi, 6/80, Note.

FIG 9.03 (GRAPH)



9.3 ASSUMPTIONS ON THE UNIT CAPACITY OF ROAD NETWORK

The capacity is determined by three factors: the capacity of roads between junctions, the capacity of junctions and the efficiency of the network. The link and junction capacities are governed by national standards. However the network efficiency may be increased by traffic management techniques.

9.3.1 Assumptions about new roads and junction capacity:

The capacities of new roads were calculated on the basis given in "Roads in Urban Areas: 1966"[8] This manual, especially Tables 1-4 and 1-5, specified the road design standards necessary to carry the predicted traffic efficiently and economically. Eg; the capacity of a dual-2-lane urban motorway with grade separation and no frontage access was specified to be 3000 P.C.U.'s per hour for one direction of flow.

Technical memorandum H5/75, issued in 1975 by the Department of the Environment, however modified the standards given in Roads in Urban Areas.[9] Using the revised memorandum, the capacity of the motorway, mentioned above, would be 3600 vehicles per hour, equivalent to nearly 4,300 P.C.U.'s per hour assuming an average vehicle mix - a 43 percent increase.

Opportunity was taken, with the introduction of small roundabouts, to increase the capacity of roundabout junctions, including those priority junctions which were changed to mini-roundabouts.[10]

However, the changes to roads and junction standards were issued after the Local Government Re-organisation. Therefore, the changed standards are unlikely to have influenced design decisions taken before 1975.

When the revised standards were issued no specific reasons were given for the changes however they were generally associated with improvements in driver ability and vehicle construction. These variables were not taken into consideration in the "Roads in Urban Areas" standards. Therefore one could argue, that irrespective of the memoranda issued in 1975, the improved capacities would be reflected on the ground. These improved conditions could have encouraged the highway authorities to delay the implementation of plans. However, this argument cannot be justified for the following three reasons.

Firstly, any improvements in vehicle performance and driver ability should have been reflected equally on trunk roads, yet I have already shown that trunk road plans were being implemented faster than the planned rate. Secondly, there is a wide variation in the implementation of plans. This suggests that the reason for the variation cannot be universal, such as efficient driver behaviour. Lastly, I will show in the next sub-section, that the unit capacity of road networks has not significantly improved since the mid-60's.

Therefore it is reasonable to conclude that the planners did not make significant errors through ignoring future increases in road capacity, due to improved performance: the improved capacity assumed in the technical memoranda was not a significant reason for the low implementation of plans.

9.3.2 Value of traffic-management as a means of increasing capacity:

Traffic management has long been recognised as a means of achieving efficient flow of traffic. The Transport Act 1968, widened the powers available to local authorities to manage traffic.[11] This Act extended the principle of Exchequer grants to expensive traffic management schemes, thus putting them on a comparable footing with major highway construction. Road Circular 1/68 - Traffic and Transport Plans, illucidating on the intentions of the new provisions, stated, "Meanwhile (in the short term) much more can be done to tackle the objectives through the use of traffic management .... To this end, the Minister is asking urban authorities to prepare Traffic and Transport plans ..... Most authorities will find it convenient to relate their plans to some specific date in the mid-1970 s".[12]

It is reasonable to believe, that the extended traffic management powers and the subsequent call by the Minister to prepare Traffic and Transport Plans, gave the necessary initiative for the local

authorities to introduce ambitious measures to efficiently manage the capacity of their road network (traffic management to increase capacity or supply management), to control traffic demand (demand management) and to re-assess their long term plans in the changed circumstances.

Nottingham City Council, in introducing their "Zone and Collar Experiment" in 1973, pointed out that, "Many improvements to the flow of traffic have been made in Nottingham over the last ten years using traffic management measures.[14] These include one-way systems, peak hour clearways, waiting restrictions, junction improvements and linked traffic signals. Often the substantial increases in road capacity have simply transferred the problem to other locations, which in turn, require improvement."

The above view, that traffic management is generally an inefficient way of increasing road capacity is also held by other transport planners.[15] In the rest of this sub-section I will first present a resumé of work done by Thomson to estimate the success of traffic management in Central London.[16,17] I will then extend his method to a sample of 9 towns in order to quantify the significance of traffic management in increasing the capacity of road networks.

Thomson's work was based on speed and flow data, completed bi-annually, by Greater London Council and the Transport and Road Research Laboratory. He estimated that the capacity of Central London's road network was increasing at 1.85 per cent per annum between 1952 and 1960 and that the rate of increase then fell to 1.10 percent between 1961 and 1966. (During 1965 and 1966, no increase was detectable). During this latter period of low growth in capacity however the rate of implementation of traffic management substantially increased (following the formation of London Traffic Management Unit in 1961). Moreover, during this latter period as well as traffic management there was an accelerated programme of junction improvements.

Based on network capacity calculations and other evidence Thomson concluded that, "the true capacity (after allowing for road building, improved vehicle performance and parking restrictions) of Central London's (road network) has been falling as a result of traffic management ..... No one will dispute that it is sometimes efficient to make people turn left when they want to turn right or to travel round three sides of a block instead of one .... But the experience in Central London reminds us that there are always costs involved in restricting freedom of movement and that these costs should not be incurred unless there are clear, over-riding benefits to be gained therefrom."

Capacity estimates for the major road networks in a sample of eight towns are derived in Figure 9.03. For each town, a set of evening peak and off-peak flows, together with respective speeds are given for each of 3 years - 1967, 1971 and 1976, in columns 1 to 4 of the Figure. This data was supplied to me by Transport and Road Research Laboratory (TRRL) partly from their published records and partly from their unpublished works on urban congestion surveys. [19,20,21]

In columns 5 to 8, the statistical method advanced by Thomson is used (see Notes to Figure 9.09 for an explanation of the application) to derive speed-flow equations for the respective years. The equations for each town are given in column 9. The network capacity for each town, for each of 3 years, at an arbitrary speed of 30 mph is given in column 10. The rest of the information was provided by me to assess the effectiveness of traffic management in increasing the capacity of networks.

This assessment is based on the 1967 and 1971 capacity figures only. I ignored the 1976 figures from the following discussion for two reasons. Firstly, I wish to explain the low-implementation of plans only up to 1974. Secondly, the data supplied by the Transport and Road Research Laboratory include improvements to network caused by removal of on street parking. These measures were more popular after the 70's than before. A large amount of on-street parking space in urban areas has been replaced by expensive off-street car-parks. The latter measures are too expensive for them to be classified as traffic management.

TOWN	YEAR (BASE)	AVERAGE 2-WAY FLOW PCU/HR	AVERAGE SPEED : KPH	1976 EQUIV ALENT FLOW PCU/HR	FLOW RATIO 1976EQ-500 / BASE YR-500	AVERAGE RATIO	SCALD FLOWS PCU/HR	SPEED - FLOW RELATIONSHIP	FLOW AT 30 KPH PCU/HR	LENGTH OF C'WAY Km	AV.WIDTH OF C'WAY X10^3 m^2	AREA OF C'WAY X10^3 m^2	NETWORK CAPACITY PCU x km x 10^3 PER HR	PARKED VEHICLES PER km ON-STREET	CAPACITY LESS INCREASED ROAD AREA PCU x km x 10^3 PER HR
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
READING	1967 PEAK	1480	24.9	1714	1.239		1794								
	OFF-PEAK	1150	29.4	1411	1.402	1.320	1358	v=49.2-0.0166q	1157	35.0	9.8	343	40	21.2	40
	1971 PEAK	1570	27.5	1539	0.971		1611								
	OFF-PEAK	1220	31.1	1296	1.106	1.038	1247	v=47.5-0.0131q	1336	42.6	9.3	396	57	9.9	48
	1976 PEAK	1505	28.0	1505	1.000		1505								
	OFF-PEAK	1040	34.9	1040	1.000	1.000	1040	v=47.2-0.0126q	1365	54.5	9.1	496	74	11.5	59
PRESTON	1967 PEAK	1635	31.2	1453	0.840		1586								
	OFF-PEAK	1370	31.4	1435	1.075	0.957	1333	v=45.4-0.0095q	1621	24.1	10.7	258	39	20.2	39
	1971 PEAK	1750	29.9	1571	0.857		1529								
	OFF-PEAK	1465	33.3	1262	0.790	0.823	1294	v=44.7-0.0081q	1815	33.7	9.8	330	61	11.3	47
	1976 PEAK	1835	27.0	1835	1.000		1835								
	OFF-PEAK	1335	32.5	1335	1.000	1.000	1335	v=45.6-0.0099q	1576	32.8	10.5	344	52	8.4	49
CHESTERFIELD	1967 PEAK	920	36.7	985	1.155		1197								
	OFF-PEAK	795	34.3	1138	2.163	1.659	989	v=45.7-0.0118q	1331	24.9	9.3	232	33	13.6	33
	1971 PEAK	1030	32.3	1266	1.445		1447								
	OFF-PEAK	725	36.4	1004	2.240	1.843	915	v=46.3-0.0131q	1244	28.2	9.6	271	35	12.0	30
	1976 PEAK	1055	35.6	1005	1.000		1005								
	OFF-PEAK	895	38.1	895	1.000	1.000	895	v=43.3-0.0071q	1873	25.2	9.9	250	47	7.1	50
WATFORD	1967 PEAK	1550	30.7	1387	0.845		1164								
	OFF-PEAK	1080	34.7	743	0.419	0.632	867	v=37.9-0.0030q	2079	26.3	9.5	250	55	14.3	55
	1971 PEAK	1410	28.6	1725	1.346		1813								
	OFF-PEAK	1115	30.4	1435	1.520	1.433	1387	v=40.3-0.0086q	1198	30.9	9.4	290	37	14.8	32
	1976 PEAK	1725	28.6	1725	1.000		1725								
	OFF-PEAK	1210	31.8	1210	1.000	1.000	1210	v=39.0-0.0060q	1500	30.6	10.0	306	46	10.2	43
OXFORD CENTRAL AREA	1966 PEAK	1733	19.6	1330	0.673		1361		KPH						
	OFF-PEAK	1194	21.8	1002	0.723	0.698	984	v=27.3-0.0045q	1622	8.3	11.4	95	14		
	1971 PEAK	1554	18.1	1554	1.000		1554								
	OFF-PEAK	1211	20.4	1211	1.000	1.000	1211	v=28.2-0.0064q	1281	8.3	11.4	95	11		

NO VALUES AVAILABLE TO ADJUST OXFORD

FIGURE 9.03 (Table)

TABLE 8.01

TOWN	YEAR (BASE)	AVERAGE 2-WAY FLOW PCU/HR	AVERAGE SPEED : KPH	1976 EQUIV. ALENT FLOW PCU/HR	FLOW RATIO 1976EQ-500 / BASE YR-500	AVERAGE RATIO	SCALD FLOWS PCU/HR	SPEED - FLOW RELATIONSHIP	FLOW AT 30 KPH PCU/HR	LENGTH OF C'WAY Km	AV.WIDTH OF C'WAY X10^3 m^2	AREA OF C'WAY X10^3 m^2	NETWORK CAPACITY PCU x km x 10^3 PER HR	PARKED VEHICLES PER km ON-STREET	CAPACITY LESS INCREASED ROAD AREA PCU x km x 10^3 PER HR
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LIVERPOOL	1967 PEAK	1705	27.7	1830	1.104		1882			3		1		2	
	OFF-PEAK	1255	30.9	1399	1.191	1.147	1366	v=41.6-0.0083q	1398	114.6	11.9	1364	160	22.4	160
	1971 PEAK	1930	27.4	1870	0.958		1841			3		1		2	
	OFF-PEAK	1420	31.3	1345	0.918	0.938	1363	v=40.8-0.0068q	1588	113.6	12.4	1409	180	21.5	174
	1976 PEAK	1655	29.0	1655	1.000		1655								
	OFF-PEAK	1210	32.3	1210	1.000	1.000	1210	v=41.0-0.0072q	1528	120.4	12.7	1529	184	13.8	167
MANCHESTER	1967 PEAK	2045	28.5	2037	0.995		2167								
	OFF-PEAK	1490	31.9	1652	1.164	1.079	1568	v=45.6-0.0087q	1793	114.3	11.3	1292	205	17.6	205
	1971 PEAK	2185	26.7	2241	1.033		2197								
	OFF-PEAK	1570	32.8	1549	0.980	1.007	1577	v=45.4-0.0082q	1878	127.7	11.8	1507	240	15.2	204
	1976 PEAK	1935	29.4	1935	1.000		1935								
	OFF-PEAK	1425	33.9	1425	1.000	1.000	1425	v=45.3-0.0081q	1889	145.1	11.7	1698	274	9.2	240
LEICESTER	1967 PEAK	1715	26.1	1947	1.191		1965								
	OFF-PEAK	1320	29.6	1501	1.221	1.206	1489	v=42.3-0.0095q	1295	41.2	11.3	466	53	14.8	53
	1971 PEAK	2080	29.3	1539	0.658		1453								
	OFF-PEAK	1510	33.1	1054	0.549	0.603	1109	v=40.0-0.0048q	2083	51.1	12.3	629	106	15.8	78
	1976 PEAK	2075	25.1	2075	1.000		2075								
	OFF PEAK	1475	29.8	1475	1.000	1.000	1475	v=41.5-0.0079q	1456	60.3	12.1	730	88	9.9	75
LUTON	1967 PEAK	1250	30.7	1147	0.863		1237								
	OFF-PEAK	905	32.2	947	1.104	0.983	898	v=39.5-0.0076q	1250	35.9	8.1	291	45	9.6	45
	1971 PEAK	1315	28.2	1445	1.160		1374								
	OFF-PEAK	845	33.0	840	0.986	1.073	870	v=39.8-0.0083q	1181	38.8	7.8	303	46	7.0	44
	1976 PEAK	1375	29.0	1375	1.000		1375								
	OFF-PEAK	920	32.4	920	1.000	1.000	920	v=39.5-0.0077q	1234	40.6	8.7	353	50	6.1	43

FIGURE 9.03 (Table): cont

NOTES ON FIGURE 9.03 (Table)

(1) COLUMNS 1-4 WERE SUPPLIED BY TRRL.

(2) IN COLUMN 5, THE 1976 EQUIVALENT FLOW IS DERIVED FROM A LINEAR SPEED-FLOW EQUATION. THE CONSTANTS FOR THE EQUATION, FOR EACH TOWN ARE DERIVED FROM THE 1976 PEAK AND OFF-PEAK SPEED-FLOW VALUES

EG: USING 1976 VALUES FOR LIVERPOOL

1976 PEAK: $29.0 = A + (B \times 1655)$ 1

OFF-PEAK: $32.3 = A + (B \times 1210)$ 2

SOLVING EQUATIONS 1 & 2,

$B = -0.00742$, $A = 41.28$

$V = 41.3 - 0.00742Q$ 3

WHERE V = SPEED IN KPH AND

Q = FLOW IN PCU PER HOUR

USING EQU^{n} 3 ;

1967 PEAK EQUIVALENT FLOW (COLUMN 5) WHEN SPEED = 27.7 KPH IS

$Q = -\frac{27.70 - 41.28}{0.00742} = 1830$ PCU PER HR.

(3) IN COLUMN 6, I ASSUMED THAT AT A FLOW OF 500 PCU (LOW FLOW) THE AVERAGE TRAFFIC SPEED IS THE SAME IRRESPECTIVE OF THE NETWORK CAPACITY (RECOMMENDED BY J.M. THOMPSON: PAGE 723, TRAFFIC ENGINEERING AND CONTROL APRIL 1967, AS REASONABLE IN URBAN AREAS WHEN NEW ROAD CONSTRUCTION IS LIMITED)

IN THIS COLUMN, THE CAPACITY CHANGE SINCE THE BASE YEAR TO 1976, IS MEASURED AS A RATIO OVER 500, FOR BOTH THE PEAK RESULT AND THE OFF-PEAK RESULT, AN AVERAGE TAKEN, AND THE FLOWS SCALED UP (OR DOWN) BY THIS AVERAGE VALUE.

EG: $\frac{1830 - 500}{1705 - 500} = 1.104$; $\frac{1399 - 500}{1255 - 500} = 1.191$

(4) IN COLUMN 7, $(1.104 + 1.191)/2 = 1.147$.

(5) IN COLUMN 8, THE SIX "SCALED FLOWS" VALUES ARE ESTIMATES THAT WOULD SET THE SPEEDS FOR ALL YEARS EQUAL WHEN FLOW = 500 PCU/HOUR

EG: $1.147 (1705 - 500) + 500 = 1882$

NOTES ON FIGURE 9.03 (Table): CTD

(6) COLUMN 9 : THE 6 PAIRS OF VALUES IN COLUMN 4 AND COLUMN 8 ARE USED TO FIT BY REGRESSION ANALYSIS, A SPEED-FLOW EQUATION FOR THE 1976 NETWORK.

EG: THE 1976 EQUATION FOR LIVERPOOL IS GIVEN IN THE LAST ROW FOR LIVERPOOL, UNDER COLUMN 9.

: $V = 41.0 - 0.0072\ Q$.

THE EQUATIONS FOR THE OTHER TWO YEARS, 1971 AND 1967 ARE DERIVED AS FOLLOWS.

SLOPE OF EQN. FOR GIVEN YEAR

= SLOPE OF 1976 EQN. x AVERAGE RATIO GIVEN IN COLUMN 7 FOR THE EQN. YEAR

EG: THE SLOPE FOR 1971 $_{\text{LIVERPOOL}}$ EQN. = 0.0072 x 0.938 = 0.0068

THE INTERCEPT IS THEN CALCULATED, USING THE ASSUMPTION THAT THE AVERAGE SPEED IS THE SAME FOR EACH YEAR WHEN THE FLOW IS 500 PCU PER HR.

EG: THE INTERCEPT, "A" FOR 1971 $_{\text{LIVERPOOL}}$ IS GIVEN BY

$A - (0.0068 \times 500) = 41 - (0.0072 \times 500)$

IE; $A = 40.8$ KPH

THE 1971 "SPEED-FLOW" EQUATION FOR LIVERPOOL IS

$V = 40.8 - 0.0068\ Q$.

(7) VALUES IN COLUMN 10 ARE CALCULATED FROM THE RESPECTIVE EQUATIONS IN COLUMN 9.

(8) DETAILS FOR COLUMNS 11, 12 AND 15 WERE SUPPLIED BY TRRL.

(9) IN COLUMN 14, NETWORK CAPACITY = FLOW IN COLUMN 10 x LENGTH OF C'WAY IN COLUMN 11.

EG: NETWORK CAPACITY FOR LIVERPOOL 1971 =

$1588 \times 113.6 = 180 \times 10^3$ PCU.KM/HR.

(10) IN COLUMN 16, THE NETWORK CAPACITIES FOR 1971 AND 1976 ONLY ARE ADJUSTED, IN ORDER TO ALLOW FOR INCREASED ROAD AREAS, OVER AND ABOVE THE 1967 VALUES THAT HAVE RESULTED DUE TO NEW CONSTRUCTION AND "ON-STREET" PARKING RESTRICTIONS.

EG: REFERRING TO ROW 2 OF "DATA-BLOCK" FOR LIVERPOOL, CAPACITY LESS INCREASED ROAD AREA $_{\text{LIVERPOOL (1971)}}$ COLUMN 16

$$= 180 \times \frac{(1364 \times 10^3) - (22.4 \times 114.6 \times 24)}{(1409 \times 10^3) - (21.5 \times 113.6 \times 24)}$$

$= \underline{174 \times 10^3}$ PCU. KM PER HR.

*I HAVE ASSUMED THE AREA OF ROAD LOST TO A PARKED VEHICLE TO BE 8 METRES x 3 METRES = 24 SQ. METRES

Columns 11-15 contain supplementary data which allows calculation in column 16 of "net" capacity. In this context, the net capacity is the actual capacity adjusted for new construction and removal of parked vehicles since 1967. Thus any increase between 1967 and 1971 should be attributable to traffic management measures only.

The net-capacity of the network, at a speed of 30 mph is given in the last column of Figure 9.09 Taking the 8 towns together the network capacity (see Figure 9.10) increased from 79,000 PCU-Km/Hr to 82,000 between 1967 and 1971, an increase of just under 1 percent per year which is extremely small.

Formal tests as indicated in Figure 9.10 show the increase to be statistically insignificant.

In fact the above method will over-estimate the growth in capacity due to traffic management since such measures entail diversions. These in turn will increase road distance between any two given points. For instance Thomson estimated that between the average origin-destination pair, the length of journeys in Central London increased by 5 percent between 1960 and 1967 (i.e. nearly 1 percent per annum).

If the 1971 capacity for the 8 towns was corrected downwards to allow for increased journey distance, there would be no increase in real capacity over the 5 years.

A separate estimate of network capacity for Oxford City Centre was completed by me from link speed-flow measurements supplied by the City Engineer. These estimates are for 1966 and 1971. From this analysis, it would appear that traffic management reduced the city-centre network capacity over the 5 year period by nearly 30 percent!

From the calculations for the 8 towns, from the figures for Oxford and from comments elsewhere, I conclude that there is no significant increase and towns may indeed have suffered a reduction in network capacities due to the traffic management measures. Hence the under-implementation of plans are unlikely to have resulted from growths in the unit capacity of networks.

FIGURE 9.10 (Table)

SIGNIFICANCE TEST BY PAIRED DIFFERENCES ON THE EFFECTIVENESS OF TRAFFIC MANAGEMENT IN 8 TOWNS

	TOWN	CAPACITY AT 30 KPH SPEED			
		1967: $X10^3$PCU-KPH 6	1971: $X10^3$PCU-KPH 7	d Co7-Co16 8	d_2^2 9
1.	LIVERPOOL	160	174	14	196
2.	MANCHESTER	205	204	-1	1
3.	LEICESTER	53	78	25	625
4.	LUTON	45	44	-1	1
5.	READING	40	48	8	64
6.	PRESTON	39	47	8	64
7.	CHESTERFIELD	33	30	-3	9
8.	WATFORD	55	32	-23	529
		Σ = 630	657	27	1489
		n = 8	8	8	8
		$\therefore \frac{\Sigma}{n}$ = 78.8	= 82.1	3.38	186.13
					3.38
				(S^2 =	182.75
				=	13.52

$H_o : \mu_d = 0$)
$H_1 : \mu_d \neq 0$) two-tailed test

where d = difference of population means

$$t_{30KPH} = \frac{3.38}{13.52/\sqrt{8-1}} = \underline{0.66}$$

with 8-1 = 7 d.f

Since $t_{0.975(7)} = 2.37$, the value of t_{30KPH} is not significant at the 0.05 level and the difference in capacity between the 2 years is not significant.

Note: The differences are also insignificant, even if no adjustments were made for new construction. (Col. 14 of Table 9.01)

9.4 ASSUMPTIONS ON DEMAND MANAGEMENT EFFECTIVENESS

Buchanan identified four means of influencing the demand for the operational use of cars - road pricing, a system of permits or licences, parking policy and subsidising public transport.[22] Of the four methods, he envisaged a parking policy (with the public authority retaining complete control of parking space provided, its location and parking charges) as being of immediate importance. In the long run, Buchanan suggested that, "the most potent factor in maintaining a 'ceiling' on private car traffic in busy areas is likely to be the provision of good, cheap, public transport ..... but the attraction to private cars are very great and there can be no denying the difficulties of providing public transport services so intrinsically convenient that they will attract optional car traffic off the roads in appreciable quantities."

The latterday transport planners however did not test as part of their study, the effectiveness of applying the various traffic restraint and modal split policies. They implicitly assumed that sufficient demand management measures would be introduced to provide the desired level of service for the private car.[23] I will show in the rest of this section that this assumption proved to be impractical. Generally, demand management policies were found to be ineffective in producing that desired modal split. In this respect it is worth noting that demand management does not include total restriction to travel. The latter was never intended to be imposed.

Demand management became fashionable in the early 70's. Kenneth Orski reported on demand management techniques in the United States as follows.[24]

"A quiet revolution is under way in the United States in the field of urban transportation. For 30 years, the dominant goal of U.S. transportation policy was to expand the highway network in response to the ever increasing usage of motor vehicles ..... (But) they now realise that existing transportation facilities ..... present an enormous, and often vastly underutilised resource, which if managed effectively could accommodate our future travel needs for many years to come. Out of this new awareness has evolved the concept of Transportation System Management (TSM) ..... In short, TSM argues .... that the efficient operation of the transportation system requires the

management of transportation DEMAND as well as of transportation supply" (my capitals).

In U.K., the Transport Act 1968, granted the necessary statutory powers and the financial incentives for local authorities to control traffic demand.[25]

Several innovations have been introduced since the 1968 Act, in particular to attract private motorists on to the buses. I will assess the effectiveness of these measures in the following order - road pricing, licensing, provision of attractive public transport and parking restraint.

9.4.1 Road Pricing:

This involves taxing specified vehicles using selected routes, in order to reduce congestion. This proposal was examined by the Smeed Panel in 1964.[26] It is attractive as a single measure that could relieve congestion considerably and is flexible to apply. However, it cannot be easily or quickly introduced because of the elaborate administrative machinery and electronic equipment necessary. No authority in the United Kingdom has proceeded with road pricing on any substantial scale.

9.4.2 Licensing:

This can take the form of cordon control governing entry into a controlled zone or area control in which checks would be made on vehicles throughout the control zone.

A desk study of supplementary licensing in Central London was completed in 1974 and was found to be practicable.[28] However, neither this nor any other system was ever introduced in practice in any Western European Country.

It was reported, based on a licensing system introduced in Singapore, that although peak flows were reduced in the City Centre, the reduction made insignificant changes in perceived travel times.[29]

9.4.3 Provision of attractive public transport:

Various measures to promote public transport as an attractive alternative to the private car have been attempted in the post-Buchanan period. In this respect, medium sized towns have opted for measures to INCREASE THE ATTRACTIVENESS OF BUSES, while in some conurbations, RAPID TRANSIT has become popular.

The more popular measures in this respect are illustrated below (see Figure 9.12). I will provide evidence to show that these measures did not significantly attract the private motorist back to the bus.

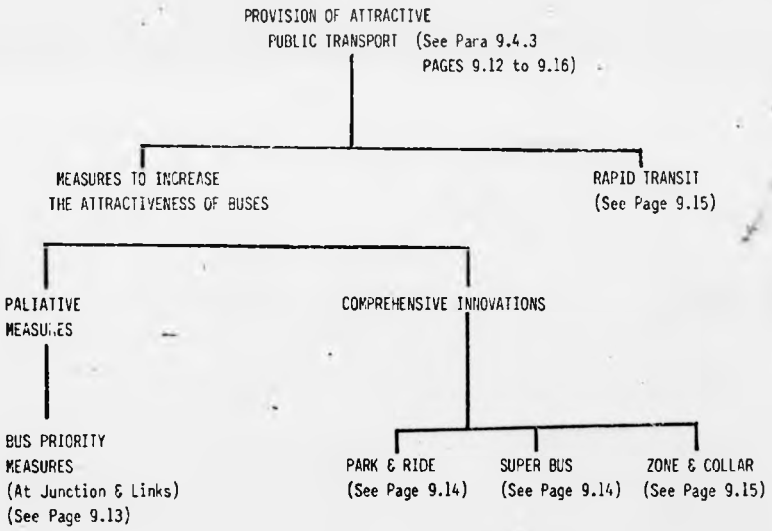


FIGURE 9.12

BUS PRIORITY MEASURES are implemented at junctions and on Links.

Limited priority to buses at junctions are given by:-

i. permitting them to make movements which are prohibited to general traffic, e.g. special right-turn facilities for buses as in Manchester and Peterborough,
ii. the provision of special signal phases as in Gateshead and
iii. facilities for buses to avoid weaving and other complex manoeuvres as in Marble Arch, London.

Between the junctions, buses are given priority in mixed traffic flows as in Southampton or by the provision of bus-lanes. Exclusive bus-ways are a speciality of Runcorn New Town. Increasingly many towns have introduced pedestrianisation of their high streets,with vehicle penetration reserved for buses and taxis; e.g. Oxford, Leeds.

Bus Demonstration Project Reports issued by the Department of the Environment assess the success of the earlier innovations.[31] However these, as most other reports, concentrate on assessing the "travel-time-savings" to bus-users as opposed to the effect of the measures on modal-split. One of the few researchers who concentrated his effort on assessing the effect of bus-priority measures on modal split is Ian Heggie of the University of Oxford: Transport Studies Unit.[32]

Heggie concluded as follows on limited-priority schemes. "What is quite clear is that they have had very little impact on car users: either in making car use appreciably more difficult or in persuading them to leave their cars at home."[33] Similarly, the NATO Committee on the challenges of Modern Society (CCMS) which completed a number of researches and recommended several ways of implementing bus priority

measures in Europe and America accepted that, "Increases in bus patronage have generally not been large ..... nor has there been much shift from car to bus travel."[34]

Where PARK-AND-RIDE operates, car users are encouraged to park on the outskirts of the town and ride a frequent and inexpensive bus-service to the centre. In Oxford, the Park-and-Ride service is further enhanced by the provision of "bus-only" lanes and by enabling buses to penetrate into pedestrian areas.

On Park-and-Ride, Heggie concluded that, "It has managed to persuade some motorists to park on the outskirts of the city and use the shuttle bus.[35] Their reason for using the service nevertheless imply compulsion more than persuasion. It is not the cheap and attractive service that appeals but the price and availability of city-centre parking space. Park-and-Ride therefore goes hand in hand with car restraint ..... The only qualification about Park-and-Ride is that it is an expensive and inefficient way of persuading motorists to stay out of central urban areas." Based on a survey of Park-and-Ride usage at Botley Road and Pear Tree, in Oxford, Heggies' conclusions are that in terms of reducing interference with urban traffic the benefits of the Park-and-Ride facilities are minimal.

The SUPER-BUS experiment, conducted in Stevenage New Town embodied a number of improvements to the conventional bus service. These are the rationalisation of the route to make the service semi-express, simplifying the fare structure and reducing fares, increasing frequency, providing shelters at bus-stops and linking these improvements with a special livery (yellow and blue) and extended publicity.

The results of the super-bus experiment in persuading the motorist has been disappointing. Two morning peak hour surveys, carried out on week days after the introduction of Super Bus: Stages I and II recorded 21 and 35 permanent shifts, representing 1.2 and 1.9 per-cent respectively of all car driver trips in the area served by Super-Bus. The bulk of the benefit of improved service was enjoyed by existing users of public transport.

The Zone and Collar experiment was tested in Nottingham.[37] It was based on imposing delays on private car traffic in order to restrain them from making morning peak hour trips and instead to attract car users to the buses. Delays were imposed to private traffic by signal control at the exits from defined residential zones onto the city-bound arterials and by control of the approaches of these arterials to the city-centre. Buses were given unrestricted passage and their services generally enhanced.

A Report on the "Zone and Collar" experiment was submitted by the Director of Planning and Transportation to the Environmental Committee of the Nottinghamshire County Council in December 1976. The Report concluded that, "The research undertaken as a result of the experiment indicates that, even had the scheme been modified to improve conditions to bus passengers comparative to those of car users ..... there would have been no substantial change in mode of travel.... It is recommended that the experimental scheme in the form it was implemented be discontinued ..... (and) the remaining parts of the experimental scheme be removed at a provisionally estimated cost of £14,000 and charged to the Bus Demonstration Capital Provision in the 1976/77 budget." The recommendation was accepted by the Council.[38]

Further evidence to support the view that bus priority measures were generally unsuccessful in persuading the private motorist is also provided by Webster. He estimated that in urban areas bus travel has been declining at about 3½ percent per annum over two decades since the mid-1950's.[39]

The most ambitious Rapid Transit scheme in Britain is the Tyneside Metro.[40] The system is designed to provide good penetration to the centres of Newcastle, Gateshead and South Shields and to provide convenient interchange facilities with the main-line stations, buses and public car-parks. The overall objective of the Metro is to reduce total journey times and to make public transport an attractive alternative to the private car by the use of high performance vehicles, by co-ordination of public transport network and by the reduction of central area and other walk times.

The infrastructure costs of the Metro were estimated to be £72 million in 1971 but this has escalated to nearly £ million in 9 years.[41] Professor Peter Hall, writing on the viability of mass transit, likened the performance of the Metro with that of the Bay Area Rapid Transit (BART) in San Francisco.[42] The latter is known to have had little effect on modal split. Professor Hall concluded, "Areas like Tyneside or any other British conurbation are far more like the San Francisco Bay Area than like Hong Kong. For them, capital-hungry investments are likely in the not very long run to be as disastrous as for the Californians ..... Was it worth it? William Rodgers and his worried officials at the Department of Transport must be asking the same question now about Tyneside - for, as with Concorde, once, it may yet be cheaper to abort the whole plan."

Before concluding this section, three further points are worth noting. Since the provision was made in the 1968 Act, public transport subsidies in U.K. have been growing at an alarming rate. In 1972 payments by local authorities for public transport subsidies totalled £13 million while for 1975, the figure was £102 million.[43] Since then, successive Governments have been attempting to limit the amount of subsidies. Secondly, in a Transport and Road Research Laboratory Study completed in 1980, the authors concluded that "when fares are reduced and/or service levels improved, public transport patronage increases due mainly to existing users making more intensive use of the system; it is unusual for such measures to attract appreciable numbers of car drivers."[44] Thirdly, measures to attract car users to public transport were not introduced in earnest before the labour landslide at the local elections in 1972.

Based on all the evidence in this sub-section, I conclude that measures to improve public transport were unsuccessful as a means to produce the desired modal-split.

9.4.4 Parking Restraint:

All the above discussions on demand management point to town-centre parking restraint as the only viable means of inducing a modal-split in favour of public transport. However, Professor May identified a major loophole of parking control.[45] "(It) is the inability to control privately available parking associated with individual places of employment which ..... represent ½ to ¾ of non-residential parking

stock in many city centres. As experience in London indicates, this can result in any reduction in the use of public parking being out-weighed by growth in private parking ..... Consultations on the proposals (to control private off-street parking) raised several objections, the enforceability of the controls were questioned, as were the problems of fringe parking, and it was suggested that controls would be unfair, specifically on those who had a greater need for parking space, and more generally on those who had previously been required by planning legislation to provide the spaces which would now be removed or taxed. This last factor particularly led to the proposals being abandoned."

With respect to the failure of parking restraint, the comments by the Director of Planning and Transportation of Nottinghamshire are also worth noting. He stated that, "the primary reason for the failure of the 'Zone and Collar' experiment in Nottingham is the amount of private off-street parking within the City." In this context, it should be noted that Nottingham has a low proportion of private off-street car-parks (only 38 percent of the total)[46]

Oxford is one of few cities which has been even partially successful in pricing the motorist out of the city centre. Presently, (Feb 1982) the daily charge in Oxford city-centre car-parks is £1.80 which compares with 50 pence in the nearby town of Swindon. However, Heggie having studied the effect of traffic restraint on private and public transport trip-making concluded that, "the car-user who cannot park ..... will simply go somewhere else where he can. Foot loose land-use activities that rely on his custom will then follow him there."

Based on the evidence given in section 9.4, I conclude that demand management was generally unsuccessful in reducing the demand for vehicle usage. Therefore successful demand management is not a significant reason for the low implementation of plans.

9.5 ASSUMPTIONS ON UNCONSTRAINED DEMAND

In this section, I will show that error in predicting unconstrained traffic demand is not a significant reason for the low-implementation of plans. I will first support this claim with some subjective evidence and follow it with a statistical test.

9.5.1 Subjective evidence:

In a letter written to me in 1978, the Technical Director of the Merseyside County Council's Joint Transportation Unit stated that, "Following the completion of the MALT (Merseyside Area Landuse Transportation) Study, reaction to it within Merseyside has been mixed. In many respects, there has been some considerable disenchantment which arises not so much from the principles of the study but from the fact that there has been such dramatic declines in population and employment in Merseyside since the original growth assumptions were made in the mid-sixties that many of the findings are now completely out of date."

Despite such poor assumptions, however, Merseyside is one of the few areas which had a large proportion of its transportation plan recommendations implemented. For instance, I have shown in section 5.4 that FMR 1974 for the MALTS was 0.69. In contrast there are a number of studies which are fairly accurate in their predictions of traffic demand, whose recommendations were poorly implemented. For instance, Leicester Traffic Plan 1965, predicted the 1975 car-ownership and population to within 10 percent of actual values, yet it only achieved very low measure of implementation ($FMR_{1974} = 0.09$)

Successive Governments have encouraged the provision of highways, particularly in the inner-city areas of conurbations, to promote economic activity. For example, in his Statement to the Parliament in 1978, William Rodgers, when he was the Secretary of State for Transport said: "..... there is a need for a road-system that would support major national objectives - the industrial strategy, regional development and the REGENERATION OF INNER-CITY AREAS ..... THE ROUTES TO THE MAJOR PORTS ARE NOT YET COMPLETE ..... CERTAIN OF THE ASSISTED AREAS STILL LACKED ADEQUATE COMMUNICATIONS". (my capitals)[48] Because of such encouragement and because of the comprehensive re-development opportunities that were available, the inner-cities in conurbations, generally achieved a higher level of implementation than elsewhere. However, it is essentially these cities, which had the worst landuse and traffic predictions, due to the complexity of their traffic movements and their rapid loss of economic activities, which was against the national trend in economy and car-ownership.

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9.5.2 Statistical evidence:

For this, I will test "predictive accuracy" of unconstrained demand against cumulative rate measure of implementation (FMR). All measurements will cover the period from the base year of the studies to 1974. (The base year is the year used for future predictions in the study).

One is initially tempted to measure the predictive accuracy of studies in terms of vehicle flows, but this approach has four main disadvantages. Firstly, consultants normally, did not predict traffic flows for intermediate years as part of their planning studies. Some published studies do not even provide numeric values for base and design year traffic flows. Secondly, it is time-consuming and expensive to collect "out-turn" traffic flow information on all the links for the 23 towns contained in the sample, and the process of converting this traffic flow data to a common basis for comparison is fraught with difficulties. Thirdly, the base-year traffic flows may not be directly comparable with future traffic flows because of the re-distribution of traffic. Fourthly, car-ownership is a better predictor of underlying traffic demand, then are traffic flows because the latter may be highly constrained by congestion.

"Total vehicle ownership" within a town for a base-year, and its variations throughout the design period can easily be derived from the immediate outputs given in a study. For the following reasons, the variable, "total vehicle ownership" was found to be a suitable surrogate for unconstrained demand. Firstly, most studies identified it to be the most important predictor of future travel demands. This is explicitly stated, for example, in Oxford Central Area Study and the Tyne Wear Plan.[49,50] Secondly, prediction of "vehicle ownership" needs as its input all the other exogenous variables most likely to be affected by predictive inaccuracies.

It is sometimes claimed that "total vehicle ownership" is not a satisfactory predictor of traffic demand because the former will not reflect the demand for "internal-external" movements and "through movements." However, I would argue that the demand for "internal-external" movements would be partially reflected by the attractiveness of an urban area as a destination which would in turn be related particularly to "commercial vehicle ownership" within a town.

A second factor that essentially determines the demand for "internal-external" movements is the vehicle-ownership within the economically dependent sub-region of an urban area. My examination of vehicle-ownership patterns within sub-regions suggests that this ownership closely follows and is only marginally higher than that of the adjoining urban areas. As for through traffic, it only formed a small proportion of total vehicle flow in the former county boroughs (= large urban areas). "Through-traffic" would have been further removed from county boroughs by the Government's policy of providing trunk roads as by-passes around major settlements. Therefore, it is reasonable to conclude that variation of total vehicle ownership within a large urban area is a suitable surrogate for unconstrained traffic demand within the area.

In this analysis, I will define the predictive accuracy of a study as

$$\text{PREDICTIVE ACCURACY(PA)}_{1974} = \frac{\text{ACTUAL INCREASE IN VEHICLE TRAVEL DEMAND SINCE BASE YEAR TO 1974}}{\text{PREDICTED INCREASE IN VEHICLE TRAVEL DEMAND SINCE BASE YEAR TO 1974}}$$

In terms of the surrogate variable "total vehicle ownership" (TVO),

$$\text{PREDICTIVE ACCURACY(SPA)}_{1974} = \frac{\text{ACTUAL INCREASE IN TVO SINCE BASE YEAR TO 1974}}{\text{PREDICTED INCREASE IN TVO SINCE BASE YEAR TO 1974}}$$

The base year, the total vehicle ownership at that time and predictions for future years are given in the respective studies. Where the population and vehicle ownership prediction curves are available for a study, the curves are used to estimate the predicted TVO for the town. In the absence of growth curves, the predicted population for 1974 was estimated by linear interpolation from the nearest predicted values while the relevant Road Research Laboratory growth curve, current for the base year was used to interpolate the 1974 vehicle-ownership rate from the intermediate values published by the Study. The total vehicle ownership is the product of total population and vehicle ownership rate per head of population.

Fig 9.06 (Table)

9.24

	BASE YEAR FOR PREDICTION	VEH/PERSON BASE YEAR	BASE YEAR POPULATION ADMIN. TOWN AREA	BASE YEAR TOTAL VEH STUDY AREA	PREDICTION YEAR	CARS/PERSON PREDICTION YEAR	PREDICTION YEAR POP. ADMIN. AREA	PREDICTION YEAR POP. STUDY AREA	1974 PRED. VEH/PERSON	1974 PRED. POPULATION ADMIN. AREA	1974 PREDICTS TOTAL VEHICLE	1974 ESTIMATED VEH/PERSON	1974 ESTIMATE OF TOTAL VEHICLE ADMIN. AREA	1974 ESTIMATE POPULATION IN ADMIN. AREA	PREDICTIVE ACCURACY VEH/PERSON	PREDICTIVE ACCURACY OF TOTAL VEH.	FOR 1974
1. OLDHAM	1960	0.13	115,000	14,950	1980	0.33	115,000		0.28	115,000	32,200	0.23	23,368	101,600	0.67	0.49	0.48
2. M'CER	1960	0.15	661,000	99,150	1980	0.38	661,000		0.32	661,000	211,520	0.23	118,784	516,450	0,47	0.17	0.30
3. BOLTON	1960	0.14	161,000	22,540	1980	0.35	161,000		0.30	161,000	48,300	0.26	40,110	154,270	0.75	0.68	0.69
4. SALFORD	1960	0.11	155,000	17,050	1980	0.28	155,000		0.24	155,000	37,200	0.21	26,519	126,280	0.77	0.47	0.22
5. ROCHDALE	1960	0.13	86,000	11,180	1980	0.33	86,000		0.28	86,000	24,080	0.24	22,951	95,630	0.60	0.91	0.51
6. BURY	1960	0.16	60,000	9,600	1980	0.40	60,000		0.35	60,000	21,000	0.26	18,223	70,090	0.53	0.76	0.38
7. L'POOL	1966	0.18	722,010	129,961	1991		722,010)	1.6-1.8m	0.32	722,010	231,043	0.23	129,345	562,370	0.36	-0.01	0.69
8. BOOTLE	1966	0.16	82,750	13,240	1991		82,750)	mostly in	0.30	82,750	24,825	0.24	16,697	69,570	0.57	0.30	0.20
9. B'HEAD	1966	0.19	143,660	27,295	1991		143,660)	overspill	0.35	143,660	50,281	0.24	32,150	133,960	0.31	0.21	0.66
10. WALLASEY	1966	0.18	103,090	18,556	1991		103,090)	areas	0.32	103,090	32,989	0.24	22,692	94,550	0.43	0.29	0.51
11. ST HELENS	1970/71	0.22	102,470	22,543	1975/76	0.31	107,600		0.30	105,910	31,773	0.23	24,339	105,820	0.13	0.19	0.63
12. SOUTH-AMPTON	1965/66	0.29	209,230	60,677	1981	0.49	225,000		0.43	222,600	95,718	0.32	68,048	212,650	0.21	0.21	0.35
13. BATH	1964/65	0.24	84,120	20,188	2010	0.53 (SATURATION IN YEAR 2000)	110,000		0.39	92,000	35,880	0.39	33,068	84,790		0.82	0.01
14. LEICESTER	1963	0.16	271,400 (452,480 study area)	43,424	1995	0.48	323,000	640,000	0.30	295,000	88,500	0.29	83,392	287,560		0.89	0.08
15. COVENTRY	1965	0.25	300,000	82,500	1981	0.44	385,000	-	0.39	343,000	133,770	0.33	110,128	333,720	0.57	0.54	0.32
16. PORTSMOUTH	1963	0.19	224,900	42,731	1985	0.48	224,900	-	0.37	224,900	83,900	0.30	59,913	199,710	-	0.42	0.30
17. OXFORD	1966	0.22	109,320 (Study Area 138,000)	24,050	1991	0.46	131,000	165,000	0.30	116,500	34,950	0.40	45,688	114,220		1.99	0.01
18. TYNEMOUTH	1966	0.16	72,280	11,565	1981	0.38	71,028		0.28	71,700	20,076	0.24	15,832	65,970	0.67	0.50	0.37
19. SUNDERLAND	1966	0.14	188,340	26,368	1981	0.33	211,705		0.25	199,240	49,810	0.18	38,342	213,010	0.36	0.51	0.19
20. GATESHEAD	1966	0.15	101,560	15,234	1981	0.33	90,136		0.25	96,230	24,058	0.21	18,818	89,610	0.60	0.41	0.24
21. NEWCASTLE	1966	0.18	257,460	46,343	1981	0.31	229,988		0.25	244,640	61,160	0.23	48,068	208,990	0.71	0.12	0.22
22. NOTTINGHAM	1964	0.22	270,000	59,400				550-600,000	0.32	291,000	93,120	0.27	77,506	287,060	0.50	0.54	0.05

In SELNEC Highway Plan and in Portsmouth it was assumed that the population within the study area will remain the same throughout the study period.

In MALTS, the study team predicted an increase of 400,000 concentrated in satelite developments. However, the team concluded that, "the transportation problems created by the additional 400,000 people would be relatively small compared with those of the other 1.4 million". Therefore in estimating the predictive accuracy of internal traffic demand within the study area, I have also ignored the needs of any additional population.

The low implementation resulted in congestion in urban areas which curbed the underlying demand being reflected as growing traffic flows. The planners did not take account of the effect of congestion, in predicting future traffic flows. In reality, this apparent satisfaction due to curbed demand could not have been a significant reason for the non-implementation of plans because similar satisfaction would have resulted and more money could have been saved if the plans for trunk and rural principal roads were not implemented. I have shown that the plans for the latter roads were implemented at a faster rate than planned.

The scale of infrastructure provisions were largely planned, on the basis of unconstrained demand. Predictions of unconstrained demand proved to be incorrect. However, I have provided subjective and statistical evidence to show that variations in unconstrained demands did not significantly affect the implementation of plans.

Therefore, I conclude that predictive accuracy did not significantly affect the implementation of plans.

9.7 NOTES : CHAPTER NINE

1. Nickson, J.V. and Batey, P.W.J. (1978). The analysis of transport within a metropolitan county structure plan, published in TOWN PLANNING REVIEW: VOL. 49 pp. 285-295

2. In a number of letters received by me from various local authority engineers discussing the low implementation of highway schemes, cut-back in financial resources was mentioned as a prime reason. For instance the Director of Engineering for Sunderland Borough Council, in a letter written to me in 1981 stated that, "the explanation as to why schemes ..... did not proceed was, and still is, simply that there were not sufficient funds available for the overall requirements for highway construction.

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17. Thomson, J.M. (April 1967) Speeds and flows of traffic in Central London: Speed-flow relations.
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* * *

PART THREE

INFLUENCE OF LOCAL FACTORS

CHAPTER TEN

INFLUENCE OF LOCAL ECONOMIC RESOURCES ON IMPLEMENTATION OF PLANS

* * * * *

The financial capability of local authorities to undertake non-trunk road and public transport infrastructure schemes was greatly enhanced until 1974, by the provision of specific Exchequer grants of up to 75 per cent.[1] However, the local authorities themselves have to meet a sizeable proportion of the cost of implementing their plans. The cost was normally financed by a long term loan though at times, a proportion is financed from revenue income and various internal funds of local authorities. At times of financial stringency it is usually easy to continue to do without items not yet possessed. The needs for capital work must be particularly pressing and very well understood - and agreed - before such work is undertaken. The purpose of this chapter is to examine if there was a shortage of funds with the county borough authorities which led to the low implementation of urban transport plans.

10.1 SATISFACTION OF NEEDS AND AVAILABILITY OF RESOURCES

"The Council faces a financial crisis of doomsday proportions ... The Council must find an additional £94 million next April including a deficit of nearly £22 million for this year."

- claimed the Labour leader of Manchester City Council.[2]

The Tories replied that,

"Manchester will have to stop providing a 'Rolls Royce service' without the ability to pay for it."

The above quotation is an example of the dichotomy of public policy as defined by two major parties. The Labour Council was willing to face financial crisis and was still looking for further sums of money to support their services. The Tories on the other hand were encouraging the cut-back of services.

Boaden, analysed 1968 data on educational expenditures in county boroughs in England. The above behaviour of Manchester supports Boaden's conclusion based on a different sphere of activity.

"(Difficulties with) finance may well be less salient to the setting of policies (than political objectives) in this field despite its very considerable expenditure."[3]

The Committee of Enquiry of Local Government Finance (1976) noted that,

"The complaint most forcefully made to us about the control of local authority spending was a simple one.[4] It was said that local authorities decided first what they intended to spend. Only thereafter did they consider what rates they must levy to meet the Bill. This process was not considered to be budgeting in the sense that individuals understood it. Local authorities were accused of being concerned primarily with the expansion of services and secondarily with the means of financing that expansion. Large projects were said to have been undertaken in many instances without adequate thought for the effect that the capital debt incurred would have in increasing current expenditure."

The Committee's comment on this complaint was that,

"Councillors cannot see their expenditure decisions directly reflected in the local rate.[5] There are a number of reasons ... The true cost of the expansion of local government services has been no more apparent to the public than to Councillors. This lack of awareness has encouraged the electorate's expectations of what local authorities ought to provide. These expectations were brought to bear on local councillors while the restraining financial pressures, which normally affect councillors when making decisions that involve the spending of public money, were reduced."

Based on the foregoing statements it can be hypothesised that,

HYPOTHESIS I: In normal times, if a local authority is politically disposed to provide a particular service, they are willing to find the resources to do so.
Cut-back in local capital finance has NOT been a major cause of under-implementation of transport plans in urban areas.

Presently no established methodology exists to compare the financial abilities of individual authorities. In the following sections, examinations will be undertaken to see if -

(i) there was any overall shortage of local authority finance nationally until 1974, which led to reduction in services;
(ii) there is any statistical relationship between local variations in wealth of authorities and their respective rate measure of implementation.

10.2 EVIDENCE FOR HYPOTHESIS ONE BASED ON COUNTRY-WIDE TOTAL EXPENDITURES

This evidence will be based on the examination of

(i) local capital expenditure patterns, and

(ii) revenue expenditure patterns

since 1966.

10.2.1 Evidence based on variations in capital expenditure patterns.

The need for large scale highway provisions and improvements particularly in the conurbations was generally accepted by local and central governments in the late 1950s. Conurbation Highway Committees were formed in 1958 to frame co-ordinated highway plans for the West Midlands, South-East Lancashire, North-East Cheshire, Merseyside, Tyneside and West Riding. These committees consisted of local authorities represented by their Chief Engineers, the Divisional Controllers from the Ministry of Transport and others representing local transport interest.[6] The Reports of the respective Committees were published in the early sixties and construction works on large scale urban roads began in earnest by the mid-sixties. For instance, the Steering Committee on Merseyside Traffic and Transport recommended highway schemes to the tune of £270 million (1964 costs) to be completed by 1982 of which £30 million was to be spent for the period 1965/70.[7] The actual out-turn expenditure for the period 1965/70 on the provision of Conurbation Highways and Traffic Committee recommended schemes was £26 million. This represents a rate measure of implementation (FMR) for the period of 87 per cent - a high rate measure.

The Buchanan Report, published in 1963, confirmed the need for increased public expenditure on the provision of urban highways.[8] The local authorities generally were now well disposed to find the additional resources necessary to support an extensive highway construction programme. Figure 10.01 (graph) illustrates this rise in local TRANSPORT capital expenditure of 72 per cent over the period 1966 to 1970 compared with a rise of less than 10.0 per cent in local government TOTAL capital expenditure.[9] The third graph in the same figure illustrates that principal road construction activities in county borough councils had a dramatic rise of 163 per cent between 1977 and 1970.

During 1966, transport capital expenditure was less than 10 per cent of local government total capital expenditure (see fig. 10.01). Therefore the rise in transport capital expenditure index up to 1970 is not greatly reflected on the pattern of total capital expenditure variations. Similarly for the period 1970 to 1974, the local transport capital expenditures have declined again without proportionate decline in other capital expenditures. Therefore it is reasonable to conclude that the rise and subsequent fall in transport capital expenditure is not due to cut-back in total capital expenditures.

10.2.2 Evidence Based on Variations in Revenue Expenditure Patterns

The repayments of outstanding debts is a burden on revenue income. In this section it will be shown that shortfall in revenue income did NOT influence the implementation of urban transport plans. The following three points are advanced in support of the above statement.

Firstly, as given in table below and in more detail in Figure 10.03 (graph) county borough councils as a whole, in England and Wales have steadily increased their revenue expenditures until 1974.

REVENUE EXPENDITURE BY COUNTY BOROUGH COUNCILS - ENGLAND AND WALES (EXCLUDING LONDON) 1966 PRICE BASIS

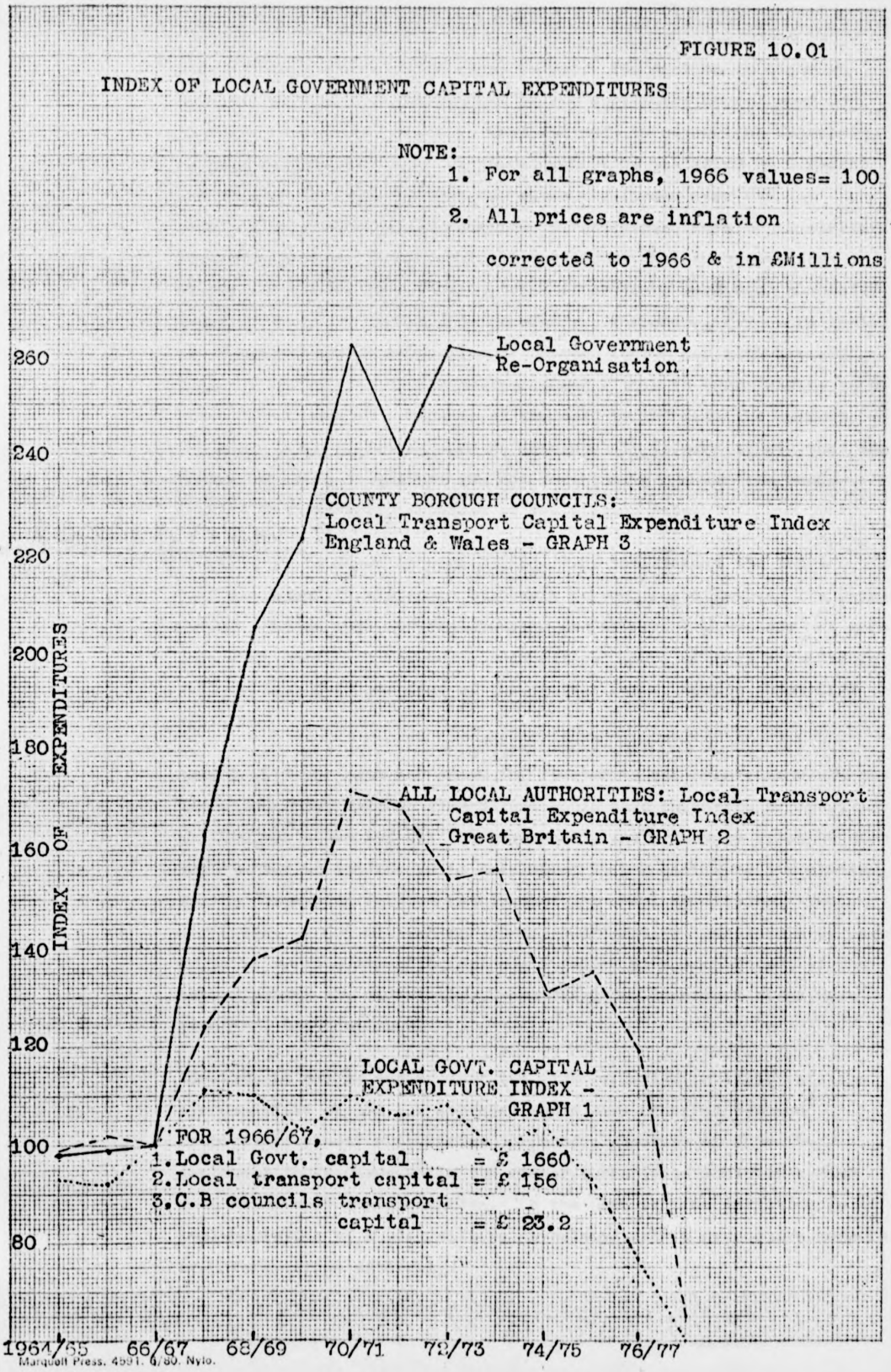
Financial Year	Total Expenditure £ Millions	Roads Revenue	
		£millions	% of total
1964/65	675	49	7.2
1966/67	738	53	7.2
1970/71	819	56	6.8
1973/74	996	64	6.4

Therefore it is unrealistic to suggest that the local authorities suffered from a general shortage of funds.

Secondly, it should be noted (see Fig 10.02 and 10.03 - graphs) that ONLY highway revenue expenditures are in an EVER reducing proportion to total expenditures since 1965. This has happened irrespective of the natural rivalry between spending departments to maintain their

FIGURE 10.01

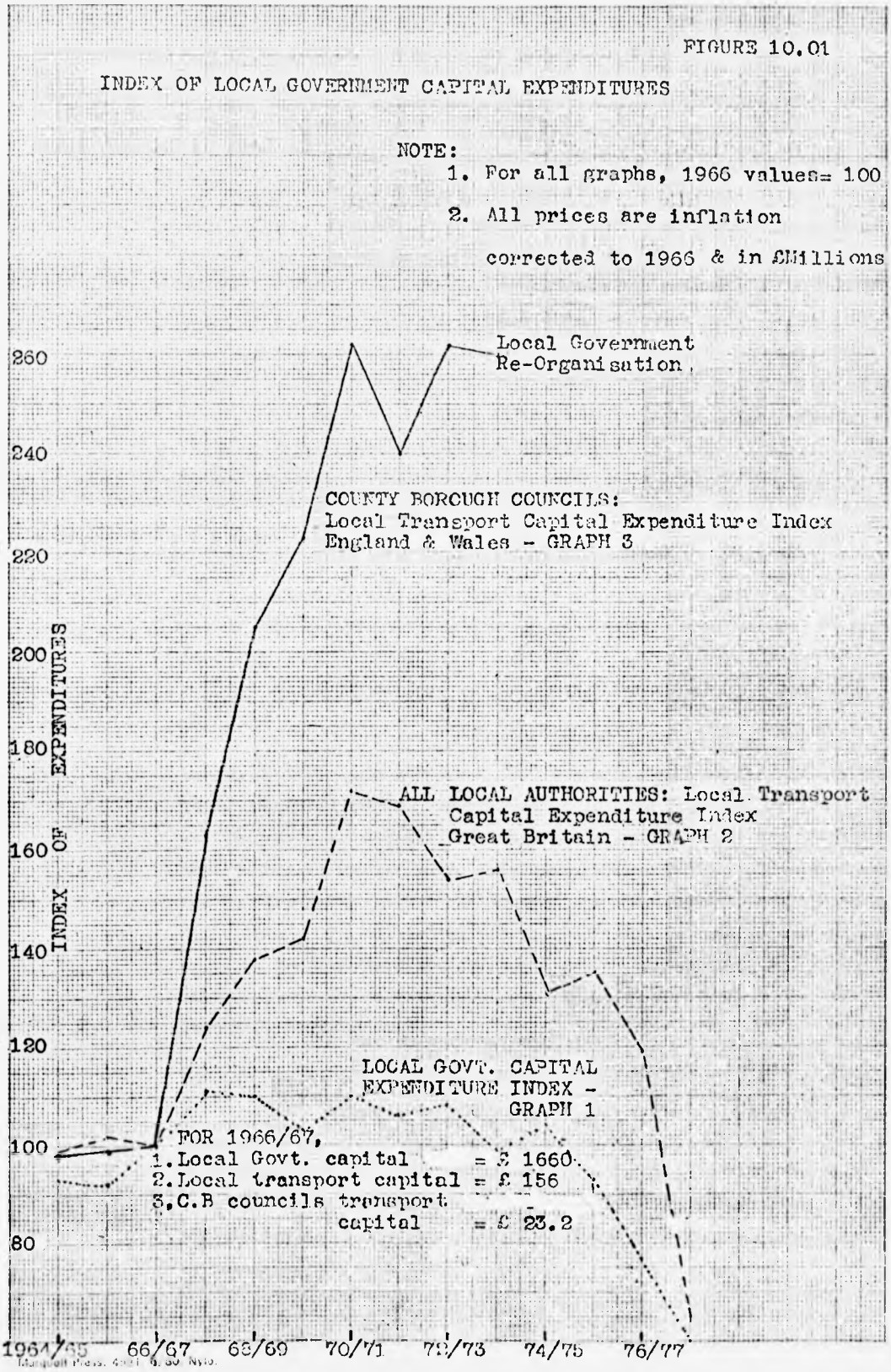
INDEX OF LOCAL GOVERNMENT CAPITAL EXPENDITURES



Marquett Press. 4591. 6/80. Nylo.

FIGURE 10.01

INDEX OF LOCAL GOVERNMENT CAPITAL EXPENDITURES

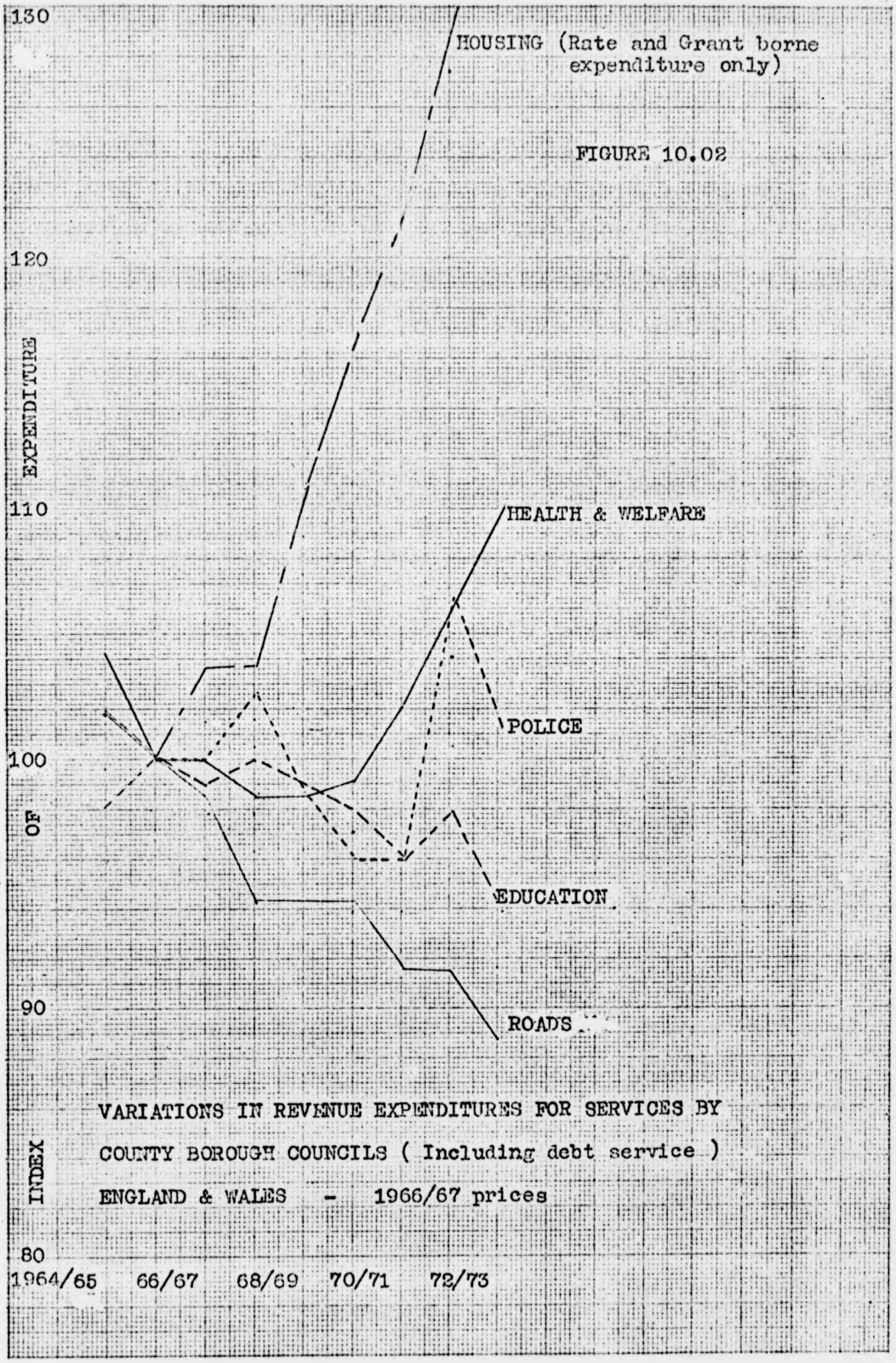


proportionate share of the total budget. The decline in highways revenue has occurred independent of any apparently urgent need for increase in another service. Even the need to support an increasing housing expenditure (see Fig 10.02) cannot be justified as a reason for decline in road expenditures since the former rise did not begin until 1966 while the decline in road expenditure began earlier. Rather it appears (see Figs 10.02 and 10.03) that the reductions in transport revenue expenditures, year after year, have been generally absorbed by other services as necessary. Therefore it is unrealistic to suggest that the proportion of revenue income for highways and public lighting was consistently reduced - this in turn leading to a shortage of capital - because of the need to increase the support for more urgent services such as housing. It is more likely that the demand for revenue support was not forthcoming because the roads capital was not being expended at the planned rate.

Thirdly, it is shown in page 7 (Fig. 7.03 table) that the total capital expenditure planned by county borough councils over the 9-year period 1965 to 1974 for implementing the transport plans was not more than £727 million. The local authorities' share of this expenditure will be nearly 30 per cent of the capital costs, namely about £220 million.

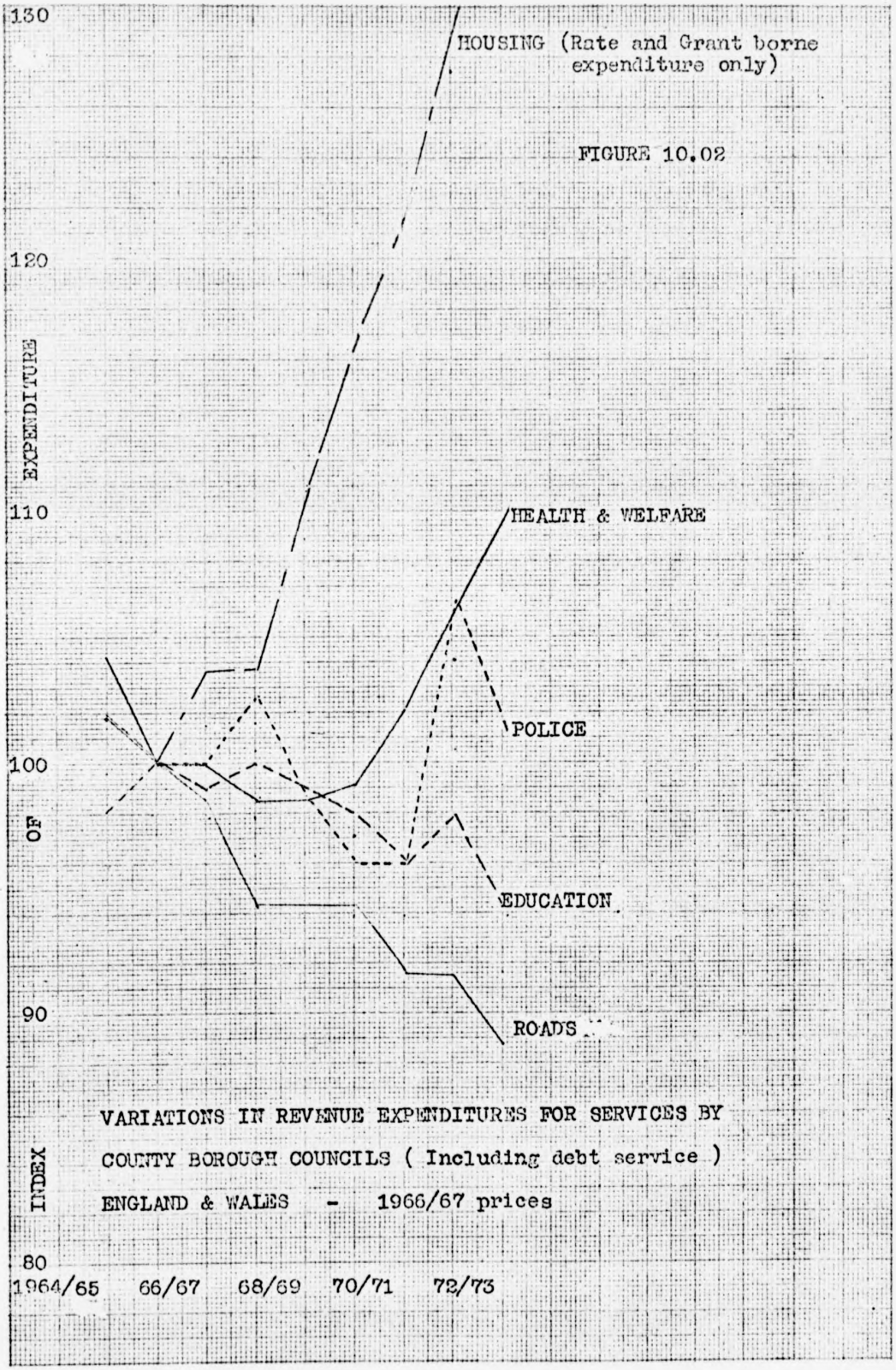
Assuming 15 per cent per annum for repayments and maintenance charges, the authorities revenue expenditure would have increased by about £33 million per annum had all the transport plans by county boroughs been implemented as intended. As only about 25 per cent were implemented, the corresponding revenue requirement was about £9 million. The difference of £24 million per annum, representing less than 4 per cent of total revenue expenditures, could easily have been found, if the enthusiasm of the mid-sixties, when the urban transport plans were launched, had continued.

However, it may be argued that the wide variation in implementation (irrespective of the low average) could have occurred because comparatively poor authorities suffered a shortage of funds to implement their plans while the richer authorities achieved a high rate measure of implementation. In the next section variation in implementation of a plan will be co-related with a respective measure of poverty of an authority.



VARIATIONS IN REVENUE EXPENDITURES FOR SERVICES BY COUNTY BOROUGH COUNCILS (Including debt service)
ENGLAND & WALES - 1966/67 prices

Marquell Press. 4591. 6/80. Nyla.



VARIATIONS IN REVENUE EXPENDITURES FOR SERVICES BY COUNTY BOROUGH COUNCILS (Including debt service)
ENGLAND & WALES - 1966/67 prices

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FIGURE 10.03

VARIATIONS IN DISTRIBUTION OF EXPENDITURES AMONG SERVICES

REVENUE EXPENDITURES ONLY (Including debt service charges)

COUNTY BOROUGH COUNCILS (ENGLAND & WALES) - 1966/67 prices

NOTE: The values given below are % of total expenditures for any given year.

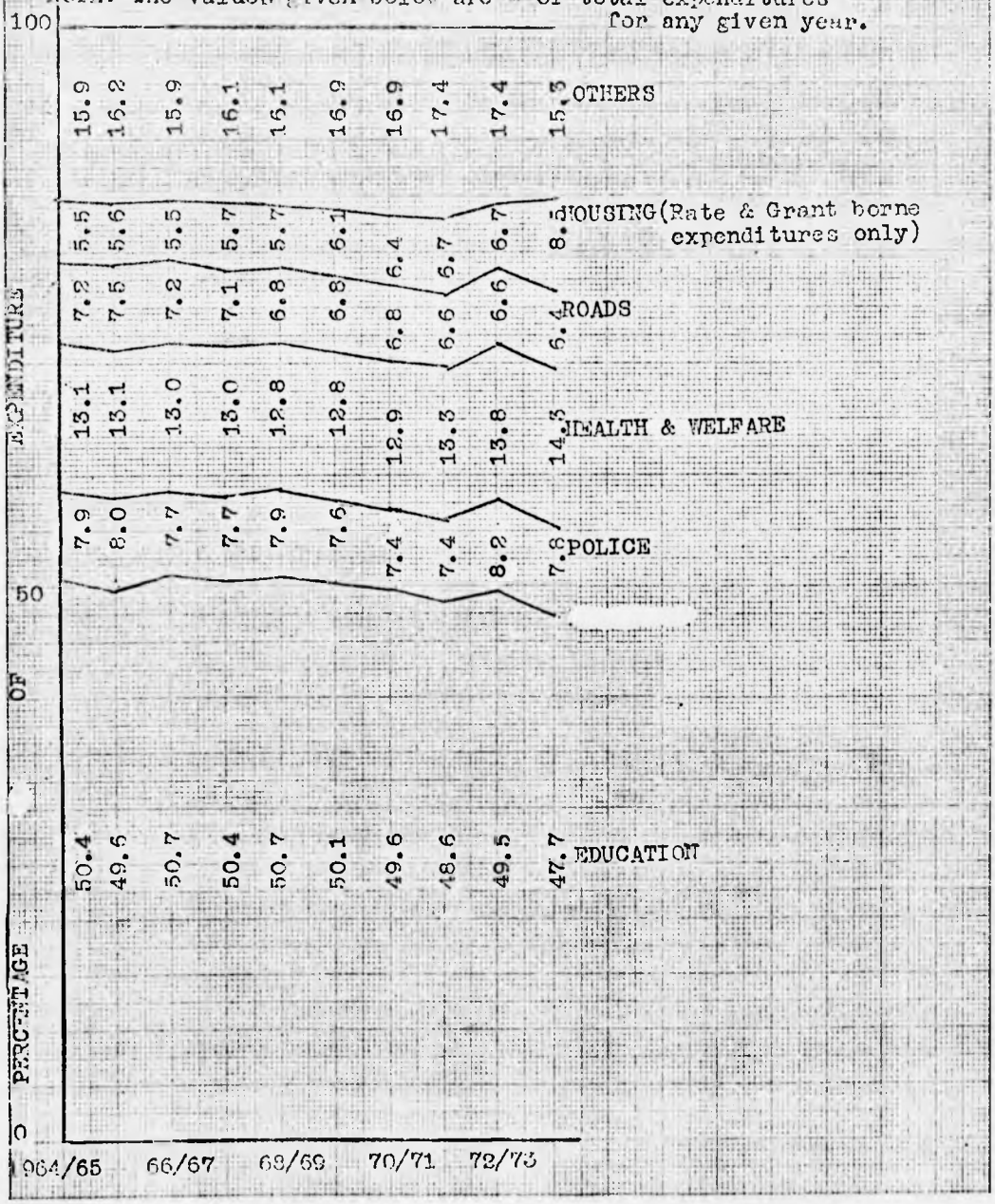

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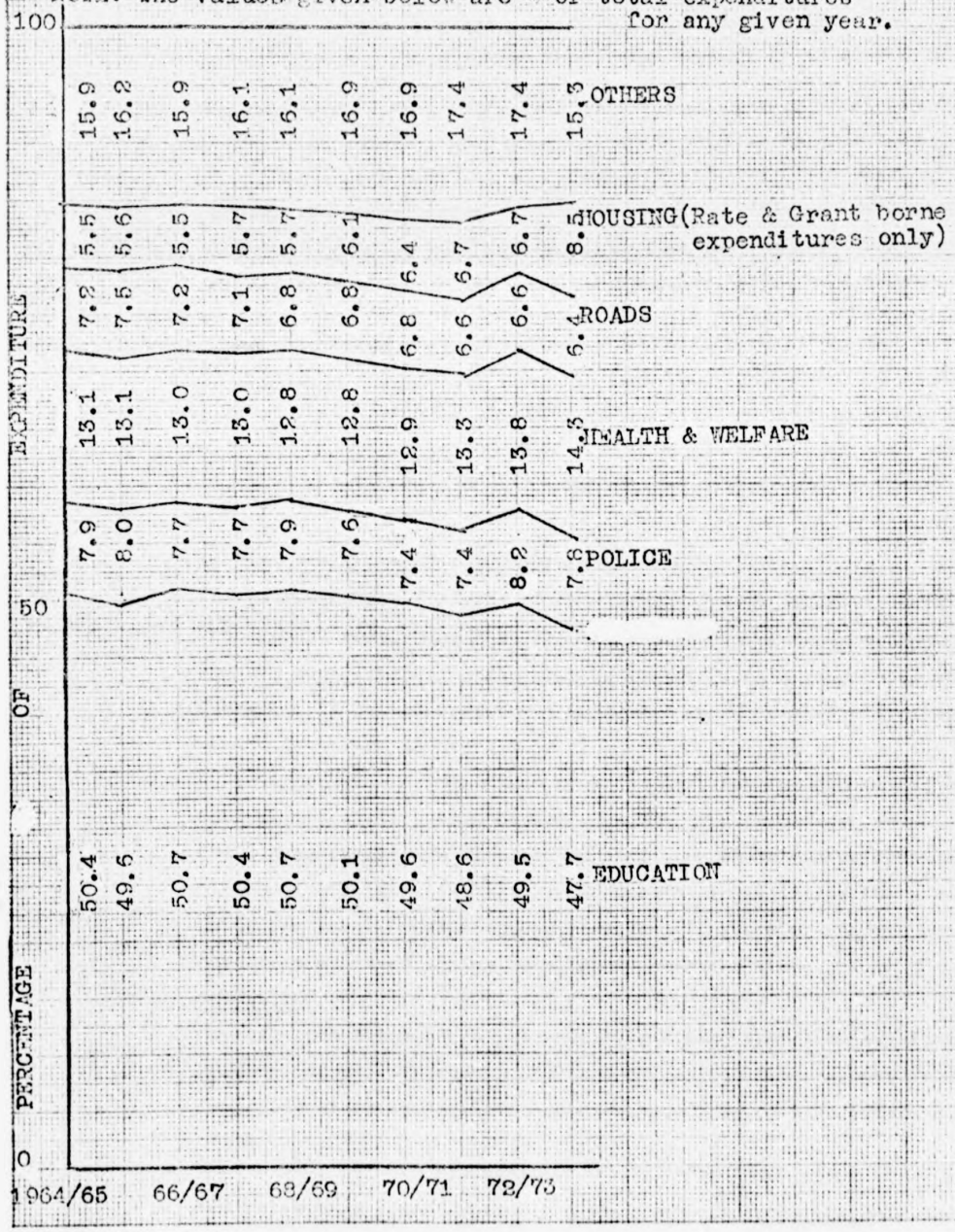
FIGURE 10.03

VARIATIONS IN DISTRIBUTION OF EXPENDITURES AMONG SERVICES

REVENUE EXPENDITURES ONLY (Including debt service charges)

COUNTY BOROUGH COUNCILS (ENGLAND & WALES) - 1966/67 prices

NOTE: The values given below are % of total expenditures for any given year.



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10.3 ANALYSIS OF RATE MEASURE OF IMPLEMENTATION (FMR) AGAINST A MEASURE OF POVERTY

The measure used here for the assessment of poverty of individual local authorities was initially defined by central Government for calculation of the resources element of rate support grant (RSG).[10] Using this formula, the county borough authorities can be ranked in terms of their poverty depending on a factor (say, the Resources Element Factor - REF) arrived by:

$$REF = \left(1 - \frac{\text{ACTUAL NET PRODUCT OF A PENNY RATE}}{\text{STANDARD PENNY RATE PRODUCT OF AN AUTHORITY}} \right)$$

The net product of a penny rate is a figure readily available for all authorities and is a yard-stock of their ability to undertake expenditure paid by their own efforts.[11] The standard penny rate product of the authority is arrived at by multiplying the average penny rate product per head of population for England and Wales by the population within the local authorities administrative area.[12]

A positive value for REF indicates comparative hardship for an authority to finance its services from local resources. A negative REF indicates relative wealth compared with the average county borough. Thus in fig 10.04(table) Oldham with 0.36 is the poorest town within the sample while Oxford is a typically rich area with -0.33.

In Fig. 10.4 (graph) a scatter-graph of FMR.VS.REF is given. A simple linear regression analysis of FMR.VS.REF shows a positive correlation ($r^2 = 0.29$) confirming that the implementation of urban transport plans was not significantly influenced by the availability of local authority finance. It is interesting to note that there is a positive, significant (at 5% level and 21 degrees of freedom) correlation between the measure of poverty REF and FMR. This could be explained by the belief generally held in the sixties that highway construction stimulates industry in an area. Also population affected by road schemes in poorer areas such as Liverpool are less likely to be successful in resisting the schemes (see Ch 13 for local pressure group resistance). Therefore poorer authorities sometimes achieved a high measure of implementation.

10.4 CONCLUSION

Capital expenditures are paid for from a long term loan serviced from revenue income. Therefore shortage of capital funds arises from inability of an authority to service them from revenue funds.

Since 1965, revenue expenditures of county borough councils in England and Wales have risen greatly. Highway provision is the only service

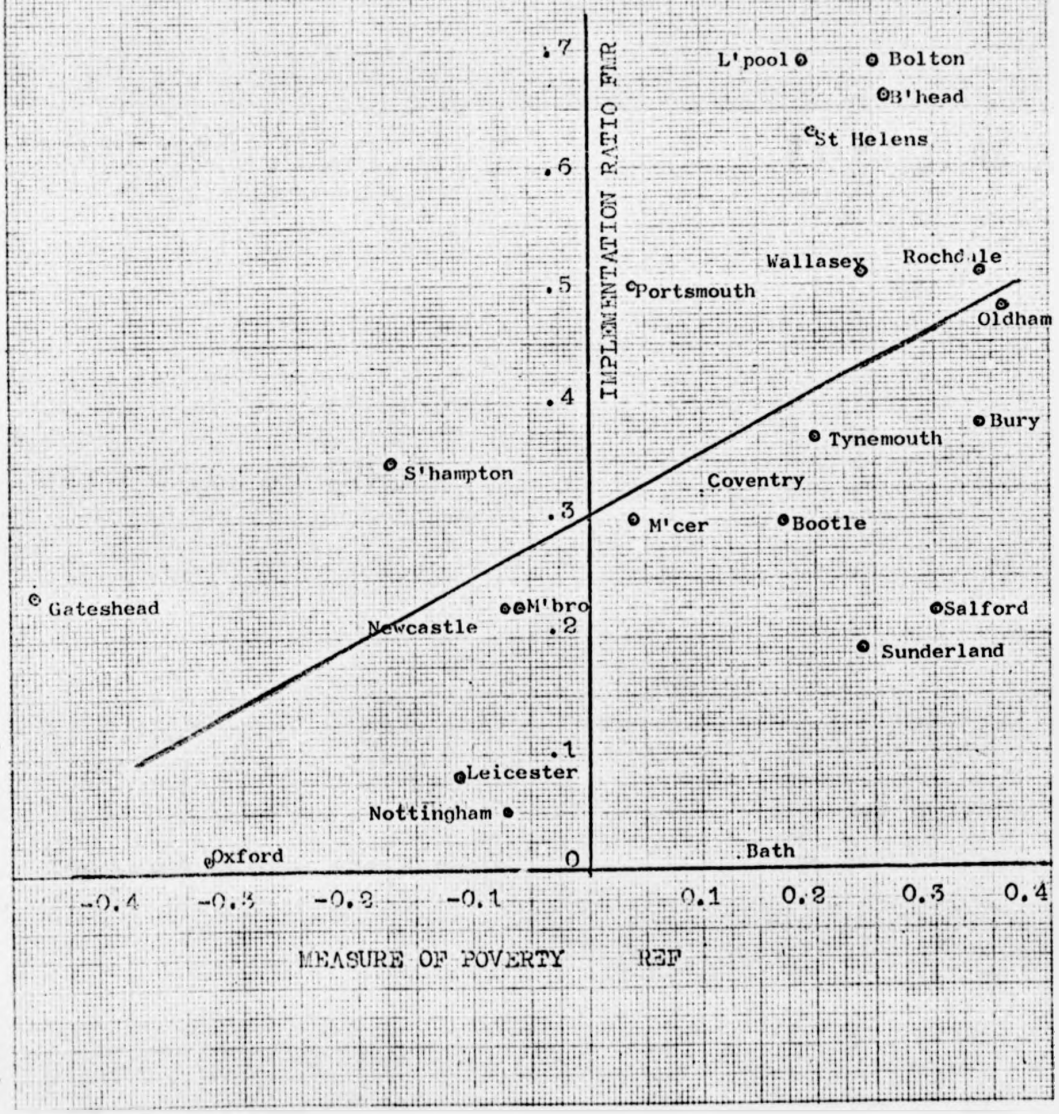
FIGURE 10.04

MEASURE OF POVERTY(REF) .VS. IMPLEMENTATION RATIO(FMR) 1974

FMR = 0.52 REF + 0.30

Coefficient of Variation

R^2 = 0.29



Marquell Press 4551 4780. Nyla.

FIGURE 10.04

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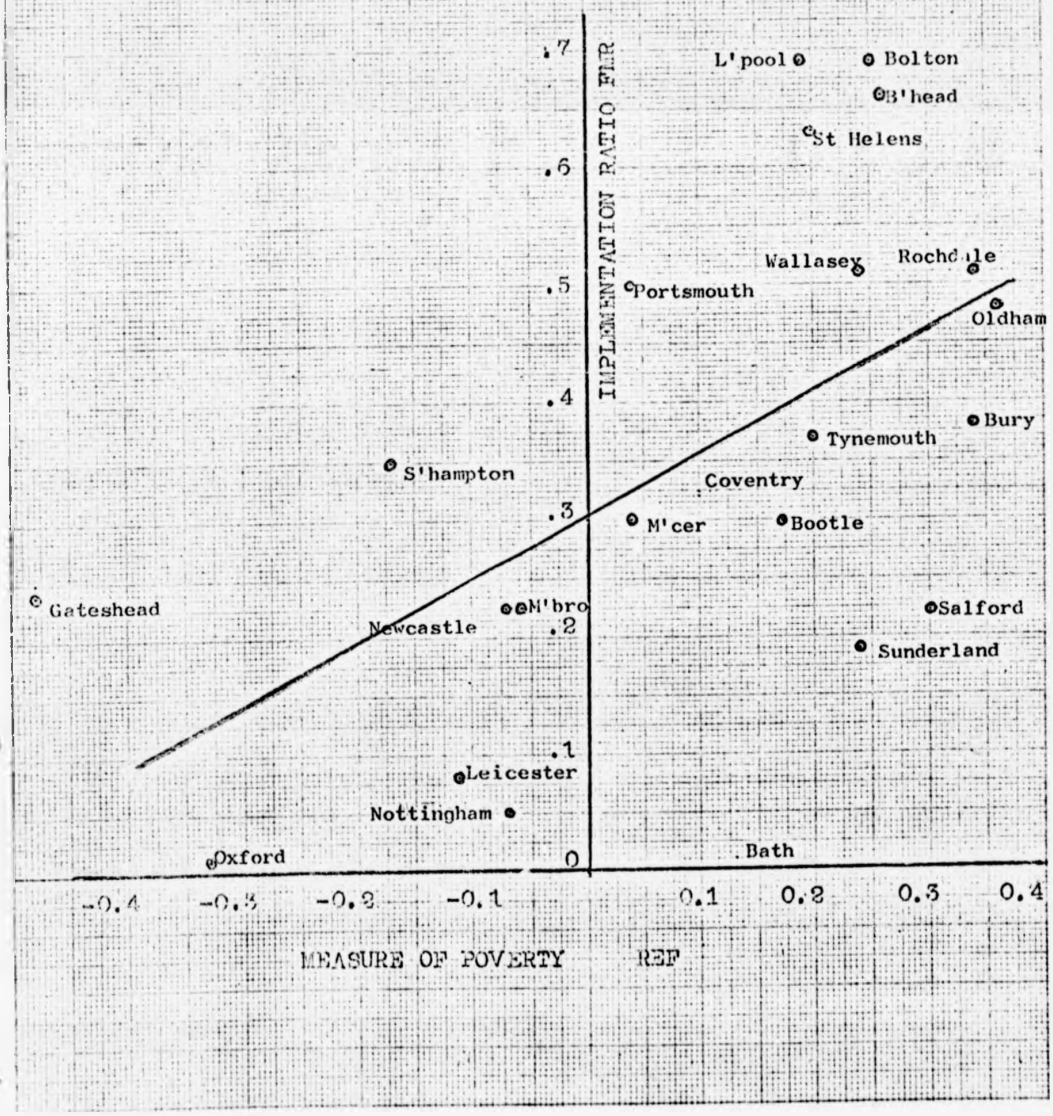

to have continuously failed since 1965 to maintain a proportionate share of revenue. The increase in the share of local authorities' total revenue needed to implement the transport plans is small. Therefore considering the country as a whole, shortage of local funds is unlikely to have been a substantial reason for under-implementation of transport plans.

This conclusion is supported by linear regression analysis which shows that there is no significant correlation between the poverty of particular authorities and their cumulative rate measure of implementation.

10.5 NOTES : CHAPTER TEN

1. For details of grants available for local authorities, refer to Ch 2 of this thesis.

2. SURVEYOR (26th June 1980) No. 4594, Vol 155 London, IPC Building and Contract Journals; p 2

3. Boaden (1971) URBAN POLICY MAKING
London, Cambridge University Press; pp 49-54

4. Layfield, F (May 1976) LOCAL GOVERNMENT FINANCE : REPORT OF THE COMMITTEE
London, HMSO, p 7

5. Op cit; pp 40-41

6. Minister of Transport (1961) ROADS IN ENGLAND AND WALES 1959-60: HC 198
London, HMSO; pp 2-3

7. Merseyside Conurbation Highways Committee (1961) HIGHWAYS PLAN
Liverpool, City Engineer's Department

8. Crowther, G (Chairman of Steering Group) (1963) TRAFFIC IN TOWNS - REPORT OF THE STEERING GROUP
London, HMSO p 9
The same theme is also adopted by Buchanan. I have provided evidence for this in Chapter 9; page 9.01 of this thesis.

9. These graphs are based on information given in the annual publication; Institute of Municipal Treasurers and Accountants - SERVICE STATISTICS; E.g: EDUCATION STATISTICS
London, Chartered Institute of Public Finance and Accountancy

10. Boaden, N, Op cit; p 15-17

11. Drummond, J M (1964) THE FINANCE OF LOCAL GOVERNMENT
London, George Allen & Unwin Ltd., pp 111-112

12. Ibid, pp 113-114.

CHAPTER ELEVEN

EFFECT OF LOCAL POLITICAL CONTINUITY ON IMPLEMENTATION

• • •

• • •

"Our own political questionnaire included a number of questions to be answered only by those authorities operating "on a party basis" ..... Those which did reply represented 86 percent of the county boroughs ..... All county boroughs with over 200,000population are 'party authorities' ..... There is no doubt however, that in party authorities, in all important matters, a combination of factors gives the majority party a whip hand ..... In many authorities operating on party lines, the party groups makes a more significant contribution to general policy initiation than any 'constitutional committee' ..... Sometimes the fluctuation of power is quite rapid. Examples have been quoted of changes of party controls at regular intervals even at each triennial election ..... We have no doubt from our own observations that annual elections do result in frequent disturbance of long-term planning."

The foregoing conclusions were reached by the Committee on the Management of Local Government after its research on politics in county borough councils.[1]

The primary purpose of this chapter is to examine the disturbance in local political continuity as a reason for the low implementation of plans. I will take this opportunity to test a further view held by some researchers, that the disaffection of local labour politicians to the provision of urban motorways, which happened in the early 70s is the prime reason for the large-scale rejection of plans.

11.1 INFLUENCE OF LOCAL POLITICAL PARTIES IN MUNICIPAL DECISION MAKING

"You don't vote against the group. We all feel strongly about that. If you're not at least loyal, you're nothing. I wouldn't vote against it. I wouldn't vote with the Party, I'd stay right away. I'd walk the corridors or in the streets - anywhere but where the voting was taking place".

Birmingham Labour Alderman: Cited by Newton (1976)[2]

"You can't vote against the group. You can't do it. That wouldn't be right. You can't do it - the group's a family. It can have its own disagreements, but if anyone puts their nose into things you tell them 'Get out, its none of your business'. I can criticize the family in its own home, but I would never do that outside for strangers to hear".

Birmingham Conservative Alderman: Cited by Newton (1976)[3]

The party groups are the backbone of city politics in Britain. Referring to the role of political parties in the municipal decision making process, Newton noted that "the old saw about 'keeping politics out of local government' was voiced by only two respondents.[4] The other sixty-four took party organisation as given and most of them then proceeded to make it clear that they felt very strongly indeed about the need for party unity in public. Often a fierce sense of duty and loyalty to the group was expressed ..... Quite often the group was described as a "family', and it was said that 'one doesn't wash one's linen in public."[4]

Dearlove supported the sentiments above when he referred to the usual caution given by the leader of the Royal Borough of Kensington and Chelsea, to prospective local council candidates - "You realise that there's a party system in operation on the Council and that the party group makes decisions, and that subject to conscience you will be expected to abide by the decision of the party? Members of the Selection Committee have to know if the candidate will support the party on all issues which are not those of conscience ..... Voting against any committee or party decision in the open council is forbidden and does not occur"[5]

Similar evidence to show the influence of party politics in local transport policy-making is also given by a number of other writers including MacEwen, reporting on Bath and Grant reporting on policy formulation in the cities of Southampton, Portsmouth and Nottingham.[6,7]

In the next section, I examine the importance of continued control that must be exercised by a political party in the local council in order to successfully implement its long term transportation plans.

11.2 CONTINUITY IN POLITICAL CONTROL AND POLICY MAINTENANCE : HYPOTHESIS I

The publication of a land use-transport study is the initial step for the construction of a network of transport capital schemes. Each of these schemes has to complete a network of preconstruction activities involving some five to eight years of preparatory work.[8,9] Committee and sometimes full Council approval is required before several of these activities can be performed. Also the Council has extensive powers to prevent the progress of a capital scheme or to change approved plans, particularly if it has not entered into an

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expensive contract with an external body. Hence, the continued support of the sponsoring council over a period of fifteen or more years is essential for the full implementation of a transport plan. A change in the party political control of the council during this period may result in the rejection or time-consuming modifications to the partially implemented plan. For instance, the Report, "Future Roads Pattern" for the City of Portsmouth was completed in 1964/65.[9] This was the only post-war year during which the Labour Party controlled this Council. When the Conservatives regained control of Portsmouth City Council in 1965, they approved this document. However, the two link roads leading from the Inner Ring Road into Southsea were soon deleted, as politically unacceptable, resulting in delays of about eighteen months to the implementation of Phase One - M275 North/South Motorway: Tipner Link, of the approved Plan.[10] Thus the change in Council resulted in major modifications to the plan content and to delayed implementation. This pattern is repeated in many places.

It can thus be hypothesised that,

HYPOTHESIS I: The success of implementation of a long-term transportation plan will depend on the continued control of the county borough council, by the local political party, under whose authority the plan was prepared.

The statistical evidence for this hypothesis is based on showing the existence of a significant co-relation between the indepen dent variable, "Political Continuity" (POLNTC) and the dependent variable FMRLGN ($\log_e$ of FMR, the financial measure of the rate of implementation) the definitions of which are given below.

$$POLNTC = LOG_e\ (POLITC)$$ where

$$POLITC = \frac{\text{(NUMBER OF YEARS UP TO 1973/74, THE PARTY WHICH PUBLISHED THE STUDY WAS IN POWER, SINCE THE FIRST YEAR OF PLAN)}}{\text{(NUMBER OF ELAPSED YEARS UP TO 1973/74, SINCE THE FIRST YEAR OF PLAN)}}$$

$$FMRLGN = LOG_e (FMR)$$ where

$$FMR = \frac{\text{(COST OF NEW INFRASTRUCTURE, BOTH RECOMMENDED BY THE STUDY UP TO 1973/74 AND IMPLEMENTED)}}{\text{(COST OF NEW INFRASTRUCTURE, RECOMMENDED BY THE STUDY UP TO 1973/74)}}$$

Evaluation of FMR was discussed in chapter 4. In the next sub-section 11.2.2 I justify the selection of the logarithmic function "POLNTC".

11.2.1 Measurement of "POLITC"

In the definition of "POLITC" the year of publication, is taken to be the year, the plan received approval in Council. Normally, the first year of implementation of the plan follows soon afterwards.

In a few cases, the first year of implementation of the recommended schemes occured before the publication of the plan. For instance, the construction of the first tube of the Liverpool-Wallasey tunnel, under the River Mersey began in 1967, within one year of the commencement of the Merseyside Area Land Use Transportation Study (MALTS). The MALTS report was not published for a further 2 years.[11] Under these circumstances, the first year of plan implementation and the year of publication of the study was taken to be the date of construction of a recommended scheme. In this respect it should be noted that in defining implementation ratios (see Section: 4.2.2) it was explained that a committed scheme should be taken as a recommended scheme if the construction work on the scheme has not begun by the date of commencement of the study.

Apart from the year of publication, three other situations require special treatment. Procedures for handling these situations - existing commitments, absence of a readily identifiable controlling group and plans prepared without political commitment by the local council - are discussed below.

Commitments entered before transfer of power: For an incoming political party, acceptance of council work would be rather like coming into Act III of a play, where much has already been established and must be taken for granted, so that certain actions must follow on irrespective of what new councillors might think should be council policy. For instance, the construction of individual road schemes normally takes in excess of $1\frac{1}{2}$ years. A political party which has newly acquired the control of the local council has to accept any contractual obligations of on-going road schemes.[12] Therefore, in counting the number of years for which a party was in power, the out-going party was assumed to be in control for one year after it had actually lost power.

Absence of readily identifiable controlling group: In Tynemouth, for instance, the majority was held by independent councillors for the whole of the period from the commissioning of Tyne Wear Study to Local Government re-organisation.[13] In this case and in Rochdale where there was a coalition government, I conducted detailed studies to determine the continued support given to the implementation of the plan and hence to determine a representative value for "POLITC". In this respect, care should be taken to identify pseudo-independent groups such as citizens, rate payers and progressives who are in fact splinter groups of the Conservative Party.[14]

In my sample of 23 councils, a total of 171 council-years was contained, from the publication of the respective studies, to the abolition of the county borough councils in 1974. During this period, there was no absolute majority in council for 20 council-years, the latter representing 11.7 percent of the total.[15] This percentage is similar to one obtained by me in a wider 74 councils sample, taken over a period of 12 years from 1962 when the period of no absolute representation was 10.3 percent. It may therefore be considered that the 23 council sample is representative of the population in England.

Excessive interference in the plan by external agencies (resulting in poor local commitment to it). Ann McEwen reporting on "Bath: A Planning and Transport Study" stated that, "We (Colin Buchanan and Partners) consulted the Bath Preservation Trust about the quality of the City's built and landscape heritage and other representative groups about the other aspects, but we worked right through to the end of an 18-month exercise without involving either the public or the City Council members in the evaluation or weighing up of transport alternatives.[16] At the end of the day a carefully argued report recommending a contentious and now famous tunnel was put to the Council vote. Those for and those against were equal, neatly balanced along party lines, an ex-Mayor produced an alternative plan without a tunnel, and the then Ministries of Transport and Housing and Local Government took the EXCEPTIONAL step of carrying out a special examination of the two proposals, ours and the ex-Mayor's themselves, in an effort to help the City Council reach a decision ..... Learning from our Bath experience, we felt to work through to a recommendation, WITHOUT taking of any soundings of local and council opinion on the way, would NOT provide a basis for an agreement on an answer." (my capitals)

Transport planning which substantially ignores local political considerations, as illustrated above is prevalent in most of the "historic cities". This may well be the major factor that led to the very low implementation of long term plans in "historic cities".

A short history of road planning in Oxford is given in the rest of this sub-section, as a second example to illustrate the continuing interference in local transport planning, by the Central Government.[17] It is worth noting, that in both Oxford and Bath, through traffic movement, which is considered to be the proper concern of the Ministries, is not a major problem.

DATE OF PUBLICATION 1953 : City Council development plan calls for a shopping centre at Cowley to releive traffic pressures on City Centre.

1955 : Minister of Housing and Local Government rejects Council's view and calls for inner relief roads. Council submits a City centre relief road plan through Eastwyke Farm.

1956 : Minister rejects the Council's plan and calls for a road through Christ Church Meadow.

1957 : House of Lords unanimously condemns the Minister's call for a road through Christ Church Meadow.

1957 : Council rejects Minister's plan. Road Research Laboratory commissioned to conduct traffic surveys.

1964 : New Oxford Development Plan continuing a road through Christ Church Meadow, published, passed by the Council and sent to the Minister.

1966 : House of Lords condemns Minister's route and calls for the development of a Greater Oxford area, to relieve congestion at the centre.

1966 : Minister's "interim" decision on Development Plan includes a suspension of road plans through Christ Church Meadow. Minister instructs the City to appoint consultants to consider alternative routes.

1968 : Consultants recommend and the Council accepts East Wyke Farm Road, with connections to the North and South with the Outer Ring Road (Phase 3).

1969 : Minister rejects phase 3 of the plan, resulting in re-design and consequent delay to the implementation of phases 1 and 2. The Council (Conservative) introduces interim traffic management measures.

1972 : New Labour Council suspends the work on East Wyke Farm Road and extends the area wide traffic management schemes (Balanced Transport Policy).

1976 : Oxfordshire County Council (Conservative) includes parts of the East Wyke Farm Road in its First Structure Plan submission to the Secretary of State.

1979 : Secretary of State (Labour) deletes the East Wyke Farm Road proposals.

In the case of Oxford and Bath, the two "historic cities" in the sample, "POLITC" was assigned a value of 0.01, suggesting that local politics is dominated by national considerations.

11.2.2 Statistical tests on the significance of political continuity

A scatter graph (see Fig. 11.01) of FMR Vs POLITC for the 23 towns in the sample suggest a degree of positive correlation (coefficient of correlation = 0.64) between the two variables. However a logarithmic function was expected to provide a better description of the relationship between the two variables, because of the decay in the rate of implementation that results due to loss of enthusiasm and changes in value over time in the part of the councils.

The results of regression analysis will be unrealistic if logarithmic transformation is applied to extremely small numbers. For instance the natural logarithm of 0 is - 00 (infinity). In order to overcome this problem, I have included the values relating to Bath and Oxford from the sample when applying this transformation.

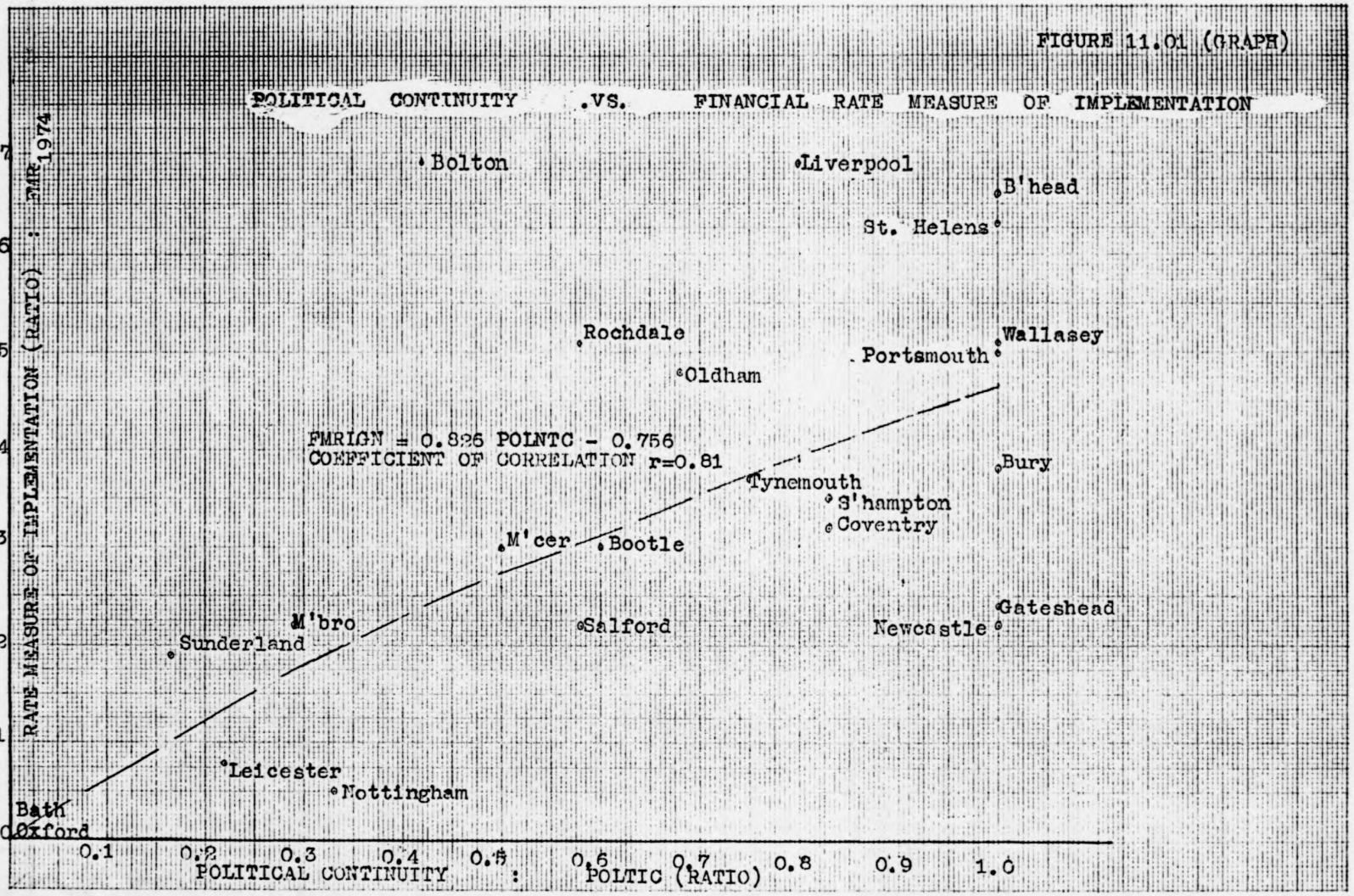
Under the circumstances, an equation of the form,

FMRLGN = 0.801 POLNTC - 0.738

proved to be the best description of the relationship between the two variables. 49 percent of the variation in FMRLGN can be explained by its association with POLNTC (i.e. coefficient of correlation = 0.70). This level of correlation, with 21 degrees of freedom is significant at less than 0.05 percent level (i.e. more than 99.95 percent level of confidence).

Therefore, the variable "POLNTC" will be carried forward for further statistical analysis in Chapter 14.

FIGURE 11.01 (GRAPH)



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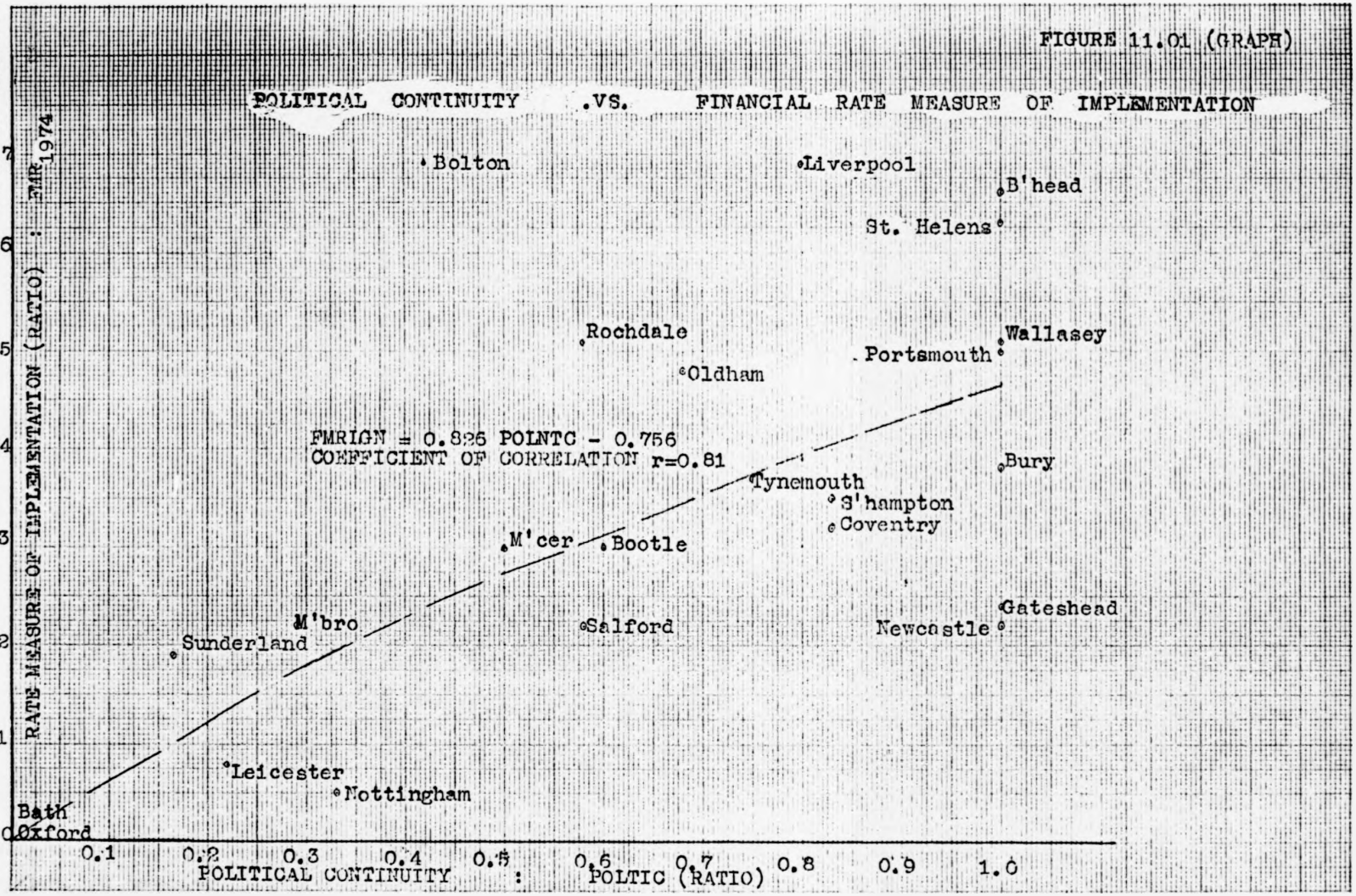

11.3 EFFECT OF CHANGES IN POLITICAL VALUES OVER TIME : HYPOTHESIS II

In the last section, continuity was expressed in terms of the original party's years in office as a fraction of all years. An alternative measure would be years to first political change as a fraction of all years. The purpose of this section is to examine which of these is more likely to affect transport plan implementation.

For national rather than local reasons, many local authorities changed party more than once during the period under study.[18,19] In the mid-sixties, when urban land use-transportation plans were being introduced, 63% of county borough councils in England and Wales were controlled by Labour. All the councils during this period were supporters of large urban road construction. Within 4 years, when most of the plans produced by the local authorities were ready to be implemented, a nationwide swing brought 78 percent of these councils under Conservative control. The effect of this swing on the implementation of transport plans was examined in the last section. A swing back in 1972, returned the control in 69 percent of the county borough councils to the Labour Party. The result of this latter swing was to bring in a large number of new labour councillors, who were uncommitted to the earlier labour plans. For instance in Nottingham, 27 out of the 45 labour members in the 1972/73 City Council were newly elected. Introduction of uncommitted members, in Nottingham and elsewhere in the early seventies is sometimes held as a significant reason for the rejection of mid-sixties urban road plans in favour of large-scale traffic management measures.[20]

Goffey and Dickens traced this swing of opinion by Labour councillors against road construction to the opening of Westway in 1970.[21]

They stated that;

"The publicity campaign that started on the day the motorway opened shook planners and traffic engineers to the core ..... The shock wave did not die, but gathered way, aided and abetted by the considerable degree of political connivance and support."

On the same note, Buchanan commented that;
"The loss of houses threatened by the rest of the roads programme in the Greater London Development Plan was ruthlessly and successfully used for political campaigning and upon a change in local government in London (when Labour were elected in 1973) the programme was dropped with little in its place beyond vague assurances regarding improvement in public transport."[22]

However, it should also be noted that,
(i) capital expenditure on principal road construction and major improvements by county borough councils during the financial year 1973/74 was 8 percent higher in real terms than the equivalent expenditure during 1971/72.
(ii) councils that adopted wide area traffic management and restraint schemes to the exclusion of all large scale road construction did not in fact inherit an approved "traditional plan", containing a number of committed schemes. For instance, in Nottingham, the first two of the schemes that were planned for implementation by the early 70's - Sheriffs Way and the Eastern By-pass - were rejected after the planning inquiry in 1970. The Conservative Council of that time, instituted a wide area traffic management scheme, "People and Traffic - Now" in late 1971 and the incoming Labour Party inherited these proposals by May 1972 and extended their application.[23]

All the above leads to the hypothesis that,

HYPOTHESIS II : The large scale local election swing in favour of the Labour Party in the early seventies did not result in abnormal frustration to the implementation of approved transportation plans.

The statistical evidence for this hypothesis is based on comparing the cumulative rate measure of implementation (F'R) for the years up to 1972 with that up to 1974, for towns which changed their political allegiance from Conservative to Labour, during the 3 years 1970 to 1972. In a sample of 23 towns, the Labour Party newly aquired the control of 14 towns during that period and retained that control until the Local Government Re-Organisation in April 1974. In addition, they had continuous control since the

publication of the respective transport plans in Gateshead, St. Helens and Birkenhead. Thus by 1972, Labour control was established in 17 out of the 23 towns (74 percent). This percentage rate compares with 68 percent Labour control for all the county borough councils in England and Wales by 1972/73.

The statistical comparison (see Fig 11.02(Table)) is carried out using Students' t-test for the paired differences of means of small samples.

P.T.O

FIGURE 11.02(Table)

COMPARISON OF DIFFERENCE OF MEANS OF CUMULATIVE FMR UP TO 1972 WITH CUMULATIVE FMR UP TO 1974 FOR TOWNS THAT CHANGED FROM CONSERVATIVE CONTROL TO LABOUR CONTROL DURING THE PERIOD 1970-72

	TOWNS THAT CHANGED TO LABOUR DURING THE PERIOD 1970-72 COL 1.	FMR UP TO 1974 COL. 2	FMR UP TO 1972 COL. 3	d= CO2-COL 3 COL. 4	d^2 COL. 5
1.	BURY	0.38	0.46	-0.08	0.0064
2.	BOLTON	0.69	0.91	-0.22	0.0484
3.	BOOTLE	0.30	0.20	+0.10	0.0100
4.	OLDHAM	0.48	0.56	-0.08	0.0064
5.	SUNDERLAND	0.19	0.22	-0.03	0.0009
6.	SALFORD	0.22	0.24	-0.02	0.0004
7.	TEESIDE	0.22	0.11	+0.11	0.0121
8.	COVENTRY	0.32	0.29	+0.03	0.0009
9.	LEICESTER	0.08	0.10	-0.02	0.0004
10.	LIVERPOOL	0.69	0.77	-0.08	0.0064
11.	MANCHESTER	0.30	0.45	-0.15	0.0225
12.	NOTTINGHAM	0.05	0.06	-0.01	0.0001
13.	ROCHDALE	0.51	0.46	+0.05	0.0025
14.	OXFORD	0.01	0.01	0.00	0.0000

$\sum d = -0.40$ $\sum d^2 = 0.1174$

$\bar{d} = \frac{0.40}{14}$

$= -0.0286$

standard deviation

$s_d = \left(\frac{0.1174}{14} - 0.0286^2\right)^{\frac{1}{2}}$

$= 0.0870$

It can be shown that for the above example, the statistic

$$t = \frac{\bar{d} - \mu_d}{s_d/\sqrt{(n-1)}}$$ where

$\bar{d}$ and s_d are the mean and standard deviation of the n (= 14 in this sample) difference obtained from the n pairs, has Student's t-distribution with $\nu = n-1$ degrees of freedom. We wish to test, at a level of significance (α) of 0.05, the hypothesis that,

$$\left.\begin{array}{l} H_o: \mu_d = 0 \\ H_1: \mu_d \neq 0 \end{array}\right\} \text{ two-tailed test}$$

where μ_d = population difference of means. Now assuming that $\mu_d = 0$,

$$t = \frac{-0.0237}{0.0724/\sqrt{13}} = -1.18$$

$$t_{0.975(13)} = 2.16$$

The difference of means is not significant at the 5 percent level, suggesting that one can accept the "null hypothesis" with 95 percent confidence and claim that there is no reason to believe that the rejection of urban highway schemes by the Labour party in the early seventies significantly affected the overall implementation ratios. Therefore one has no basis to make adjustments to the proof of hypothesis I, to allow for the "change in values" over time for the local labour parties of the early seventies compared with the local labour parties of the mid-sixties.

However, it is of interest to note that the calculated value of "t" is negative and not too small. This value of t compares with a value of t = 2.17 for the remaining 9 towns in the 23 town sample (in this case $t_{0.975(7)} = 2.365$), providing further evidence to hypothesis I.

11.4 EFFECT OF POLITICAL PRESSURES ON CHIEF ENGINEER CONTINUITY

Evidence was given in section 11.2 to show that changes in political control of the council, resulted in changes to the recommended plan. Chief Officers who are committed to the original transportation plan would resist attempts to bring changes to the plan. The incoming controlling party, wishing to introduce large scale changes to the existing plan may find it expedient to pressurise the chief engineer to depart from his position in order to appoint a new incumbent who would co-operate. In this section, we search for evidence of any pressure that was applied on the chief engineer, to vacate his post in this manner.

Grant referring to Nottingham's "Primary Highway Plan" suggested that "the combined effect of the retirement of the City Engineer, the result of the Inquiry and the arrival of the uncommitted Director of Technical Services meant that the Officers did little to protect the transport plan of 1966.[24] The new Director of Technical Services co-operated closely with the 1971-72 Conservative and the 1972-74 Labour majorities. In the other two cities, however, the officers encouraged the members to retain the existing road schemes and transport policies."

However, Newton reporting on decision-making in Birmingham noted the following words of a Labour Alderman.[25] "There's always a little skirmish of some kind going on, but a clever officer will bend in the wind. They're clever diplomats and outright conflict on anything the committee decides is important, is extraordinarily rare."

This leads us to the hypothesis that;

HYPOTHESIS III : Changes in the political control of Councils do <u>not</u> normally result in departure of chief engineers.

The statistical examination (see Fig 11.03-Table) of this is based on a χ^2 (chi-square) test. The sample contains 72 towns, representing 87 percent of all the pre-1974 county boroughs.in England and Wales. The χ^2-test is used on this sample, to show that there is no signficant association between the number of times the political control of a council changed hands and the number of changes to the chief engineer appointments. All the 72 councils in the sample had an overall majority during the whole of the period - 1964/65 to 1973/74, of this study.

FIGURE 11.03 (Table)

X^2 - TEST TO EXAMINE THE ASSOCIATION BETWEEN CHANGES IN CHIEF ENGINEER APPOINTMENTS AND CHANGES IN PARTY POLITICAL CONTROL OF COUNTY BOROUGH COUNCILS

H_o: Changes to chief engineer is <u>not</u> significantly associated with changes in party political control

H_1: chief engineer is significantly associated with changes in party political control

Level of significance (α) for testing = 0.05

Degrees of freedom = 2

Decision criterion $\chi^2_{0.05}$ = 5.99

	"0" PARTY CHANGE	1 PARTY CHANGE	2 OR MORE PARTY CHANGE	
0 : C.E. CHANGE	10 (8.8)*	9 (11.0)	34 (33.2)	53
1 OR MORE C.E CHANGE	2 (3.2)	6 (4)	11 (11.8)	19
	12	15	45	72

*The values in brackets are the expected frequency. For example; $\frac{12 \times 53}{72} = \underline{\underline{8.8}}$

$$\chi^2 = \frac{(10 - 8.8)^2}{8.8} + \frac{(9 - 11.0)^2}{11.0} + \frac{(34 - 33.2)^2}{33.2} + \frac{(2 - 3.2)^2}{3.2} + \frac{(6 - 4)^2}{4} + \frac{(11 - 11.8)^2}{11.8}$$

$$= 2.04$$

$\chi^2_{0.05}$ (2 d.f) = 5.99 at 5% level, suggesting that there is no significant association between changes in chief engineer and changes in party political control of county borough councils.

11.5 CONCLUSION

The success of implementation of long term transportation plans is very much dependent on the continued control of the county borough council, by the local political party under whose authority the plan was prepared. Political continuity in this respect (Hypothesis I) was measured as a ratio of the number of years the party which published the plan was in power to the total plan period.

I then proceeded to show (Hypothesis II) that no adjustments were necessary to the first test in order to allow for the large scale local election swing in favour of the labour party that happened in the early 70s. I also showed (Hypothesis III) that changes in the political control of councils do not normally result in departure of chief officers.

11.6 NOTES : CHAPTER ELEVEN

1. Harrison M & Norton A (1967) MANAGEMENT OF LOCAL GOVERNMENT : VOLUME 5
London, H.M.S.O; p. 97

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9. City Engineer - City of Portsmouth (September 1965) FUTURE ROAD PATTERN

10. Information on delay was supplied to me by a senior staff member of Hampshire County Council who worked for the former Portsmouth City Council
ALSO refer to Grant J; ibid. p. 60

11. Minister of Transport (1968) ROADS IN ENGLAND: HC1
London, H.M.S.O; p.

12. NEW CIVIL ENGINEER(14 May 1981) Liverpool Ring Road dies as Labour marches in.
London, Thomas Telford Ltd; p. 6

13. Such information can be readily obtained by consulting successive volumes of MUNICIPAL YEAR BOOK

14. Bulpitt, J.G. (1967) PARTY POLITICS IN ENGLISH LOCAL GOVERNMENT London, Longmans Green and Co. Ltd; p. 21 and pp. 104-130

15. 20 Council + years in this respect is accounted by Rochdale which had power-sharing between the 3 main parties for a number of years and Tynemouth where the Council had a large number of independant members

16. Mac Ewen, A
Op.cit; pp. 8-9

17. History of road proposals in Oxford is covered by a number of publications. The following are of particular interest.

(i) Newman, R. (1980) THE ROAD AND CHRIST CHURCH MEADOW Oxford, The Polytechnic

(ii) Hopkins, S (1978) PLANNING IN OXFORD: WORKING PAPER NO. 31 OXFORD POLYTECHNIC, DEPARTMENT OF TOWN PLANNING Oxford, The Polytechnic

(iii) Plowden, S (1972) TOWNS AGAINST TRAFFIC London WC1, Andre Deutsch Limited, 105 Great Russel Street; pp. 58-87

(iv) Grigs, D. & Chipperfield, J. (4th December 1968) Oxford Roads 1968 published in a supplement to OXFORD MAIL Oxford OX1 2DJ, Oxford Mail and Times, 12 New Inn Hall Street

18. Newton, K.
Op.cit; pp. 13-30

19. Sharpe, L.J. (1967) In defence of local politics published in VOTING IN CITIES
London WC2, Macmil lan and Co. Ltd., Little Essex Street; p. 3

20. Grant, J
Op.cit; pp. 114-130

21. Goffey & Dickens

22.

23. City of Nottingham (1972) PEOPLE AND TRAFFIC - NOW: PREFERRED SCHEME Nottingham, The Transportation Committee

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25. Newton
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CHAPTER TWELVE

EFFECT OF OFFICER PARTICIPATION ON IMPLEMENTATION

* * *

* * *

"At the height of his powers and the summit of his profession he served with great energy and vision as Chief Engineer and Surveyor to the West Riding County Council. Those of us who negotiate the Doncaster By-pass, spin up and down the M1 south of Leeds, or traverse the recently opened stretches of the Trans-Pennine motorway ..... are all making use of transport facilities provided under his direction."

The above words, spoken of Colonel S. Maynard Lovell, C.B.E. by the Public Orator when the former received an honorary degree of Doctor of Technology from the University of Bradford, are given here to illustrate that the successful completion of large scale infrastructure works is often regarded by public and professionals alike as the achievement of the Chief Engineer to the public authority.

In this chapter we examine the importance of continuity in participation of key individuals, in the local authorities' professional group, as a determinant of the (level of) implementation of urban transport plans.

12.1 IDENTIFICATION OF KEY INDIVIDUALS

The recommendations contained in transport plans changed significantly over the post-war period, for instance, as to the need for large scale road construction as opposed to the need of more buses. Depending on the expertise necessary, several senior officers from the local authorities' professional group would play important roles, at various stages from plan inception to plan implementation. In this section, I show that irrespective of the period of study, major civil engineering construction, particularly the provision of highways, accounted for a large part of the recommended expenditure. Therefore, the Chief Engineer (and his deputy) were well placed to be the key professionals to provide the expertise necessary and to ensure the "successful" implementation of transport plans.

For the purpose of this chapter, transport plans prepared since the war are considered in four distinct phases - Immediate post-war period, Pre-Buchanan period, Buchanan period and period post-1968.

12.1.1 Immediate post-war period

In the immediate post-war period road space was provided on the general assumption that traffic volumes in the longer term would be about double those which obtained before the war.[2] Road schemes of short, medium and long term (1-5, 5-20 and over 20 years) to meet these limited objectives were planned and executed by the Chief engineers.[3] Land-use planning was in its infancy and was normally carried out within the engineers' departments.[4]

It was recognised that public service vehicles were important because most people were completely dependant on them and because buses occupied less road space per passenger than did cars. However they were run largely as profit-making concerns separate from other local authority services. Because of this and because of the limited scale of long-term road plans, integrated transport planning was non-existent.

12.1.2 Pre-Buchanan Period

In the post-war period, the growth of vehicle traffic was faster than anticipated, with double the pre-war flows being obtained by the mid-fifties.[5] This unprecedented growth in traffic led to the formation of Conurbation Highways Committees in 1958 to frame co-ordinated highway plans for South-East Lancashire North East Cheshire ('SELNEC'), Merseyside, Tyneside and the West Midlands.[6] Being Committees dealing with highway provisions, the local authorities were represented by their respective chief engineers. The Ministry of Transport was represented by the Divisional Road Engineer. The working parties consisted of the more senior staff from these engineers' departments.[7]

The Reports of the Conurbation Committees were published in the early sixties, a large proportion of the schemes were entered in the Ministry's Preparation List and the construction of large scale urban motorways began in earnest by the mid-sixties.[8]

In the representative sample of 23 studies given in Table of this thesis, the SELNEC Highway Plan represents this group of studies.

12.1.3 Buchanan period

The studies published during this period were based on the advice given in Traffic in Towns (Buchanan Report).[9]

The Buchanan report, published in 1963, redefined the concept of the environmental area and that of the hierarchy of distributor highways - the primary distributor, the district distributor and the local distributor.[10]

Circular No. 1/64, issued jointly by the Ministry of Transport and the Ministry of Local Government, recommended the Buchanan Report to the local authorities.[11] It recommended an integrated approach to land-use and transport planning. Land use/transportation studies for London, the conurbations and the larger free-standing towns were approved by the Government on a cost-sharing basis with the local authorities.[12] The following extract from the Circular is of relevance.

"Urban land-use and urban transport requirements must be considered as a single subject. The integration of policies covering land-use, housing, highways, traffic and transport is therefore of fundamental importance ..... Traffic on the scale now forseen can only be handled safely and efficiently if the longer (term) traffic flows are canalised on to a system of roads - the primary road network - where traffic needs take precedence ..... In the longer term, authorities should aim to develop plans for a complete primary road network, using the technique of the land-use/transport survey ..... A properly thought-out primary road network will form the essential basis of an urban development plan."

Studies prepared during this period form the bulk of the sample (see Figure 5.06) used for analysis, in this thesis. Merseyside Area Land-Use Transportation Study (MALTS) is the one in this sample which considered land-use factors in greater detail than did the other studies. Therefore MALTS is used below as an example when considering the relative levels of participation of the land-use planners and the engineers in the study process and in the subsequent implementation of the transport plans prepared during the Buchanan period.

The role of the planner: The opportunity for planners to influence the recommendations contained in a land use - transportation study will be greatest, when there is substantial land-use change, for instance due to abnormal population growth, within the study area.

In Merseyside, they anticipated the 1966 population of 1.4 million within the study area to grow by a further 400,000 by 1991.[13] A pilot land use-transport study was undertaken to choose from 6 alternatives, a land-use plan for the main study. From then on, the main study continued essentially as a traditional transportation study, suggesting that the rest of the land-use input needed was only of a general nature. In the early stages of the study, there is insufficient opportunity for the planners to influence the final recommendations.

Referring to the various land-use inputs, the MALTS team stated that "more than four-fifths of the road construction and improvements would be required by all plans. This reflects the fact that, though substantial, the transportation problems created by the additional 400,000 people would be relatively small compared with those of the other 1.4 million."

It is also worth noting that the professional study personnel in the MALTS team consisted of 14 engineers, 5 planners, 2 public transport specialists and 8 others and that the Chairman of the technical committee was the Liverpool City Engineer.[15]

The role of the engineer: The provision of highways accounts for most of the recommendations contained in land-use/transportation studies. For instance MALTS recommends a capital expenditure of £287 million on highway construction, £21 million for parking and traffic management, £8 million for the provision of buses and £12.5 million for the improvement of urban railway network.[16] The greatest influence on what alternative highway networks are considered feasible and should be tested and finally what goes into the plan will be that of the Engineer.

The publication of the land-use/transportation plan is the initial step of a network of activities involving a further 5 to 8 years or more of preparatory work necessary before the execution of schemes recommended by the plan can begin.[17] In this respect, it is interesting to note that of the 23 transportation studies sponsored by the various county boroughs and contained in my sample, those relating to Bath, Oxford and Leicester had the least preparatory work completed before most of the recommendations contained in these plans were abandoned. The plans for Oxford and Bath were prepared by consultants with minimum participation by the respective city engineers.[18] None of the schemes recommended in these two plans reached the Ministry's preparation list.

In Leicester, the design works for the Central Ring Road, the only scheme to reach the preparation list was completed by the Engineer, before the commencement of the study for Leicester Traffic Plan 1965. This latter study was prepared by the City Planning Officer, with minimum participation by the Engineer. None of the other schemes recommended in the Leicester Traffic Plan reached the stage in their scheme preparation, required for inclusion in the list.[19]

I do not wish to imply by giving these examples that the engineers resisted the implementation of those plans in which they did not play a key role. Indeed, the plans for Bath and Leicester were two of the most expensive recommendations made for cities of their respective sizes and therefore promised a prominent role for the Engineers' Department.

12.1.4 Post-1968 period

The Transport Act 1968, the Town and County Planning Acts 1968 and 1971, the Local Government Act 1972 and the Department of the Environment Memorandum 73/104 are the main pieces of legislation affecting transport planning during this period.[20]

The Transport Act introduced three important measures relating to urban transport planning. Firstly, it created the Passenger Transport Authorities (PTA) in an attempt to co-ordinate road and public transport operations in the conurbations. Secondly, it eliminated the financial bias against public transport capital

expenditure by treating it on a par with highway expenditures for Exchequer grants. Thirdly, it increased the planning powers given to local authorities to use traffic management measures as part of a comprehensive local transport policy.[21] The first two measures would have had the effect of increasing the influence of the public transport planner in the preparation of urban transport plans. This effect will be examined in the next section. The third measure could have affected the final recommendations of urban transport plans and their implementation, for instance by delaying the construction of a major highway in preference to implementing an area traffic control scheme. The effect of this measure was shown (see Chapter 9) to be insignificant.

The Town and Country Planning Act 1968 provided that in the longer term, comprehensive transport plans should dovetail into structure plans. In this respect one needs to examine the effect of any increased part played by the land use planners, in determining the form and content of transport plans produced after 1968.

The Local Government Act 1972 gave effect to the Local Government Re-Organisation in 1974 and the consequent transfer of the bulk of the transport planning powers from the former county borough authorities to the new county councils. Together with this, the Department of the Environment Circular 104/73, introduced the Transport Policies and Programmes (TPP) system. We need to consider, the effects of these post-1974 legislative changes, only insofar as they affect the applicability of the results of this research. This study of applicability will be considered in Chapter 15. In the rest of the sub-section, I will examine the role played by public transport planners and land use planners only during the period 1968 to 1974.

<u>The role of the public transport planner:</u> The important studies in this respect are those relating to the conurbations which were published after the enactment of Transport Act 1968. In our sample given in Figure 5.06, these studies are represented by the Merseyside Area Land Use Transportation Study and the Tyne Wear Plan.

Figure 12.01 (Tab) is a summary of financial considerations for alternative transport concepts used in MALTS.[22]

FIG 12.01 (TABLE)

FINANCIAL DETAILS OF ALTERNATIVE TRANSPORT CONCEPTS USED IN MALTS

LEVEL OF CAR USAGE	LOW	INTER	HIGH	RECOMMENDED
TRANSPORTATION CAPITAL COSTS: £ MILLION				
(i) Highway capital	162.5	237.5	377.5	291.9
(ii) Car parking facilities	9.8	16.0	33.4	16.2
(iii) Public transport capital costs - buses	8.6	5.5	1.3	8.0
(iv) Public transport capital costs - railways	18.4	11.9	2.4	12.5
	27.0		3.7	
TOTAL	199.3	270.9	414.6	328.6

The public transport capital cost varies between £3.7 million, when the level of car usage to be provided for is high and £27.0 million, when the level of car usage is low. These variations in public transport costs are substantial in real terms. However, the effect of these variations on highway capital finance availability is relatively small. For instance, the above variations in public transport expenditure represent between 1.1 percent and 8.9 percent of the recommended total expenditure, the balance representing that to provide highways. Also it is worth noting that the highway expenditure in the plan was determined independent of public transport provisions the former being largely based on capital finance availability as indicated by the Ministry of Transport, the unfulfilled transport needs being provided for by public transport.

Two transport alternatives were tested in the case of Tyne Wear Plan.[23] Alternative I allowed for 23 percent of a total transport capital expenditure of nearly £210 million to be spent on public transport infrastructure and the balance on highway provisions. Alternative II allowed for 11 percent to be spent on public transport works. In effect, the level of public transport infrastructure provision could have made a difference of only 16 percent in the highway expenditure. However, it should be noted, that additional funds were promised by the Ministry of Transport in the case of this study to provide for a higher level of public transport.

It is therefore reasonable to conclude that the enactment of Transport Act 1968 did not substantially alter the role played by the Engineer in determining the contents of land use-transport studies.

The role of the land use-planner: The introduction of the new development plan system (Structure and Local Plans) has not substantially affected the dominant role of the Engineer in determining the provision of transport facilities. It is noteworthy that neither the Department of the Environment's approval of the Structure Plan nor the subsequent preparation of a Local Plan on the basis of the approved Structure Plan convey approval of any transport plans contained therein. In particular, they do not commit the Department of the Environment or any other Government department to the payment of grant on any particular project or to the amount or timing of any capital expenditure programme.[24]

In practice transport, especially the provision of major highways, is largely determined outside the Structure Plan process. For instance, in 1972, the Town and Country Planning Association, in its evidence to the DOE/Home Office Expenditure Committee (sub-committee on Urban Transportation Planning) stated that:

"For too long Britain has allowed transportation to dominate urban planning discussions."[25]

The Surveyor elaborating on this Report, stated:

"Put baldly the operation (land use/transport planning in Britain) might be expressed as measurement of present road and rail traffic; assumption of a relatively unchanging pattern of life; projection of traffic and population growths to some arbitrary date; design of transport facilities to carry the estimated loads (and the) creation of further key developments on land which lies around major interchanges. In short, town planning is based on transportation, itself based on the belief that city life will not change its pattern ..... Well, it certainly will not, if the existing shape of developments is held in place by major construction like London's or Glasgow's urban motorways - some built, some proposed ....."

The role of the other professionals: The Clerk and the Treasurer are the important professionals in this respect. It would suffice to say that the Liverpool City Treasurer and the Clerk were admitted as observers in the MALTS technical committee while minimum professional assistance was requested from their departments.[26]

12.2 CONTINUITY OF ENGINEER PARTICIPATION AS A DETERMINANT OF IMPLEMENTATION

It was said earlier in this chapter that the publication of the landuse-transportation study is the initial step, for the construction of a network of transport capital schemes. Each of these schemes has to complete a network of preconstruction activities involving some 5 to 8 years of preparatory work. The bulk of this work demands continued professional involvement of the engineer and of his staff. In this section we examine the significance of continuous participation of the chief engineer and of his staff to the "successful" implementation of a transport plan.

12.2.1 Technical staff continuity : Hypothesis I

The detailed design and the preparation of contract documents for the recommended schemes involve the interpretation of a large amount of data which would be partly new and would partly have been collected and processed for the transportation study. The later data, would invariably need updating.

An efficient use of personnel to process and interpret the above information would be the continued employment of the staff who completed the study. In this respect Solesbury and Townsend noted that:

"In most studies, there has been a common continuity problem with staff. In Teeside as in several other areas the consultants retain a continuing brief for detailed work but there has been little transfer of staff from the consultants to the new County Borough."[27] However, with respect to MALTS, the consultants recommended that,

"Consideration be given to the establishment of a service centre which could provide conurbation-wide information to the respective authorities ..... In staffing MALTS, considerable importance was placed on the need to provide a continuity of experience and knowledge through seconded staff. This staff could now provide the nucleus for the "service centre".[28]

The following hypothesis in relation to the need for staff continuity to "successfully implement" plans prepared by consultants will be tested in the rest of this sub-section.

HYPOTHESIS 1: Continuity of employment of technical staff when plans were prepared by consultants did not significantly affect the implementation of transport plans.

The testing (See Figure 12.02) of this hypothesis is based on a sample of 23 towns. This sample is divided into two groups, one representing 11 towns whose studies were prepared by consultants (having therefore no staff continuity) and the other representing 12 towns with in-house studies. A statistical t-test to compare the difference of means of small samples is used to show that at a 5 percent level of significance, there is no difference in the mean values of the rate measure of implementation (FMR) for the two groups of towns.

SIGNIFICANCE TEST ON CONTINUITY OF EMPLOYMENT OF STAFF AND DATA

	TOWNS WITH STUDIES BY CONSULTANTS	FMR_1 UP TO 1974	TOWNS WITH "IN HOUSE" STUDIES	FMR_2 UP TO 1974
	MALTS		SELNEC HIGHWAY PLAN	
1.	Liverpool	0.69	1. Oldham	0.48
2.	Bootle	0.30	2. Manchester	0.30
3.	Birkenhead	0.66	3. Bolton	0.69
4.	Wallasey	0.51	4. Salford	0.22
5.	TYNE WEAR PLAN		5. Rochdale	0.51
5.	Tynemouth	0.37	6. Bury	0.38
6.	Sunderland	0.19	FREE STANDING TOWN STUDIES	
7.	Gateshead	0.24	7. St Helens	0.42
8.	Newcastle	0.22	8. Southampton	0.35
	FREE STANDING TOWN STUDIES		9. Leicester	0.08
9.	Bath	0.01	10. Coventry	0.32
10.	Oxford	0.01	11. Portsmouth	0.50
11.	Middlesborough	0.22	12. Nottingham	0.05

Comparison of Means of Small Samples by t-test

(i) Comparison of Variances:

To compare the means of small samples using the t-test, one must first show that the two populations from which the samples are drawn have the same (unknown) standard deviation. So one first estimates population variances from the respective sample variances and compares them using the F-test as shown below.

Level of significance (α) for testing = 0.05

$H_0 : \sigma_1^2 = \sigma_2^2$)

$H_1 : \sigma_1^2 \neq \sigma_2^2$) two-tailed test

Where σ_1^2 = population variance of FMR_1

σ_2^2 = population variance of FMR_2

From the above values of FMR,

		Consultants' Studies:1	"In-House" Studies:2
$\bar{x}$	Sample mean of FMR	0.331	0.358
n	Number of towns in sample	11	12
$\hat{\sigma}^2$	Estimate of population variance	0.053	0.034
ν	Number of degrees of freedom	10	11
σ^2	Sample Variance	0.048	0.031

Figure 12.02 (continued)

$$\text{Fisher's F} = \frac{\hat{\sigma}_1^2}{\hat{\sigma}_2^2} = \frac{0.053}{0.034} = 1.56$$

$$F_{0.975}(10,11) = 3.53 \text{ (at 5 percent level of significance)}$$

Hence F is not significant at the 5 percent level.

We accept H_o and can proceed to use the t-test for the difference of means. The best estimate of σ^2 is

$$\hat{\sigma}^2 = \frac{(0.048 \times 11) + (0.031 \times 12)}{21}$$

$$= 0.043$$

(ii) Comparison of means:

We can now test

$$\left.\begin{aligned} H_o &: \mu_1 = \mu_2 \\ H_1 &: \mu_1 \neq \mu_2 \end{aligned}\right\} \text{ two-tailed test}$$

where μ = population mean

Take $\alpha = 0.05$

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\hat{\sigma}\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} = \frac{0.311 - 0.358}{\sqrt{\frac{0.043}{11} + \frac{0.043}{12}}} = -0.54$$

$$t_{0.975} \text{ with 21 d.f} = \underline{2.080}$$

Hence the difference in means is not significant at the 0.05 level meaning that towns with studies by consultants did not have a significantly lower rate measure of implementation (FMR) than those with in-house studies.

12.2.2 Chief engineer continuity : Hypothesis II

Success in expensive and complicated negotiations (with several parties persuing conflicting interests) over the construction of engineering schemes having long gestations, normally demand the personal attention of the chief engineer or his deputy. These negotiations continue in stretches, over the whole of the gestation period and afterwards. The important parties in this respect are the local authority politicians, especially the chairman of the highways committee, the Divisional Road Engineer of the Department of Transport - the local link for Exchequer grant assistance and the chief engineers of other public bodies.[29]

The MALTS team, referring to the organisation necessary for the successful implementation of their study noted that

"In terms of line management, it would be appropriate for the service unit to be responsible to the Chairman of the Technical Committee (Liverpool City Engineer), the continuation of which is imperative if the policy plan is to be implemented effectively."[30]

Grant, in his case study of Transportation Policy Formulation in Three U.K. County Boroughs stated that,

"key individuals in technical groups will play a significant role in the policy process. Changes in key individuals may result in policy changes."[31]

The principal evidence given by Grant in respect of "changes to key individuals resulting in policy changes" is limited to only 2 examples, one in Southampton and the other in Nottingham. In Southampton, the 1964 plan was abandoned soon after the City Engineer died. In Nottingham, the 1966 plan was rejected after the retirement of the City Engineer in 1970. However, it should also be noted, that elsewhere in his works, Grant suggests that the plans were rejected because the cities were unable to justify them to the Central Government.[32] With respect to the Southampton Plan, he states that

"the scheme was estimated to cost £60 million at 1965 prices and the Ministry of Transport considered that such a sum was unlikely to be made available to the City".

With respect to Nottingham, "the Deputy (City Engineer) and the City Planning Officer were unable to justify the City's case against the combined efforts of the Civic Society, the Chamber of Commerce, St. Anns Tenants and Rate payers Association and A.E. Telling ..... They (the Deputy City Engineer and the City Planning Officer) were unable to convince the Inspector of their case and the application was rejected."[33]

It should also be noted that my analysis of the careers of 72 county borough engineers and their deputies over a decade beginning in 1964, show that 53 (74 percent) of these posts were continuously occupied by one man or his deputy replacing him in succession.[34] Despite this high degree of continuity of chief officers, the rate measure of implementation of plans has been low. This leads us to test

HYPOTHESIS II : The chief engineer's departure from his post, premature to the implementation of transportation plans is a significant reason for the lower implementation of plans

The test (see Fig 1303,T) of this hypothesis is based on a sample of 20 towns, (3 towns - Oxford, Bath and Leicester, were rejected due to the questionable level of engineer participation in the study process).

Of these 20 towns, 6 had changes in chief engineer, the replacement being brought from outside, 5 towns did not have a change in chief engineer after the commencement of the study and 10 county boroughs promoted the deputy on the departure of their chief engineer. There was no evidence to suggest, that in any of the last ten towns, the deputy attempted to make large scale changes to a published plan following his promotion. Therefore, for the purpose of this analysis, we are justified in assuming that the promotion of the deputy on the departure of the chief engineer did not affect the "chief engineer continuity" (CECON) necessary for the "satisfactory" implementation of the plan.

CECON for the analysis is defined as,

$$CECON = \frac{CE + DCE}{PLANYRS} \quad \text{where}$$

CE = NUMBER OF YEARS THE CHIEF ENGINEER CONTINUED TO STAY AFTER THE PUBLICATION OF TRANSPORT PLAN UP TO APRIL 1974

DCE = NUMBER OF YEARS THE DEPUTY CHIEF ENGINEER AT THE TIME OF PLAN PUBLICATION, AFTER PROMOTION TO REPLACE HIS CHIEF, CONTINUED TO STAY AS CHIEF ENGINEER, AGAIN COUNTING UP TO APRIL 1974

PLANYRS = NUMBER OF YEARS SINCE THE PUBLICATION OF THE PLAN TO APRIL 1974

In Figure 12.03 the 20 towns are divided into 2 samples, one set of 14 towns with CECON = 1 and a second set of 6 towns with CECON 1. A statistical t-test to compare the difference of means of small samples is used for significance testing.

FIGURE 12.03(Table)

SIGNIFICANCE TEST ON CHIEF ENGINEER CONTINUITY

	TOWNS WITH CONTINUOUS ENGINEER PARTICIPATION	FMR_1 UP TO 1974		TOWNS WHERE THE ENGINEER WHO PUBLISHED THE STUDY DEPARTED BEFORE 1973/74	FMR_2 UP TO 1974
1.	Liverpool	0.69	1.	Bootle	0.30
2.	Birkenhead	0.66	2.	Gateshead	0.24
3.	Wallasey	0.51	3.	Newcastle	0.22
4.	Tynemouth	0.37	4.	Middlesbrough	0.22
5.	Sunderland	0.19	5.	Bury	0.38
6.	Portsmouth	0.50	6.	Nottingham	0.05
7.	Oldham	0.48			
8.	Manchester	0.30			
9.	Bolton	0.69			
10.	Salford	0.22			
11.	Rochdale	0.51			
12.	St. Helens	0.42			
13.	Southampton	0.35			
14.	Coventry	0.32			

Comparison of means of small samples by t-test

(i) Comparison of Variances:

To compare the means of small samples using the t-test, one must first show that the two populations from which the samples are drawn have the same (unknown) standard deviation. So one first estimates population variances from the respective sample variances and compares them using the F-test as shown below

Level of significance (α) for testing = 0.05

$H_0 : \sigma_1^2 = \sigma_2^2$)

$H_1 : \sigma_1^2 \neq \sigma_2^2$) two-tailed test

Where σ_1^2 = population variance of FMR with continous engineer participation

σ_2^2 = Population variance of FMR for studies with premature departure of engineer

FIGURE 12.03 (Table):CTD

		continuous participation 1	premature departure 2
$\bar{x}$	sample mean of FMR	0.441	0.235
n	no. of towns in sample	14	6
$\hat{\sigma}^2$	estimate of population variance	0.027	0.012
ν	number of degrees of freedom	13	5
σ^2	sample variance	0.025	0.010

$$\text{Fisher's } F = \frac{\hat{\sigma}_1^2}{\hat{\sigma}_2^2} = \frac{0.027}{0.012} = 2.25$$

$$F_{0.975}(13,5) = 6.49$$

Hence F is not significant at 5 percent level, the variances are acceptably similar. We accept H_o and can proceed to use the t-test for the difference of means. The best estimate of σ^2 is,

$$\hat{\sigma}^2 = \frac{(0.025 \times 14) + (0.010 \times 6)}{18}$$

$$= 0.023$$

(ii) Comparison of means

We can now test_

Main hypothesis $H_1 : \mu_1 = \mu_2$)
Null hypothesis $H_2 : \mu_1 \neq \mu_2$) Two tailed test

Where μ = population mean

For our sample;

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\hat{\sigma}\sqrt{\frac{1}{n_1^2} \frac{1}{n_2^2}}} = \frac{0.441 - 0.235}{\sqrt{\frac{0.023}{14} + \frac{0.023}{6}}} = \underline{2.78}$$

At 5% level of significance $t_{0.975}$ with 18 d.f = 2.101

The difference of means is <u>significant</u> at the 5 percent level suggesting that one can reject, with 95 percent confidence, the "null hypothesis" H_o and claim that there <u>is</u> a significant relationship between the premature departure of the engineer and the under-implementation of transportation plans. However this result is not conclusive for two reasons. Firstly, the same claim cannot be supported with 99 percent level of confidence, when $t_{0.995}$ with 18 d.f = 2.878. Secondly, if

Oxford, Bath and Leicester studies with questionable engineer participation were also included in the last sample for comparing the means, then t = 1.73. This value of t compares with a value of $t_{0.975}$ with 21 d.f = 2.08 (95 percent level of confidence) throwing some doubt on a significant relationship between chief engineer continuity and "successful" plan implementation.

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12.3 CONCLUSION

The chief engineer to the authority is the key professional in relation to the successful implementation of transportation plans, prepared either "in-house" or by consultants. The implementation of plans is not significantly lower when carried out by consultants than "in-house".

The chief engineers occupied their posts over long periods and in the event of their departure, the deputy chief engineers were normally promoted to fill the vacancies.

The premature departure of the chief engineers, followed by a replacement from outside, in about 30 percent of the towns proved to be of some importance in explaining the low implementation of transportation plan. Although the evidence did not provide conclusive results, the statistical test values justify the inclusion of the variable, CECON, in the multiple regression analysis to be carried out in Chapter 14.

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12.4 NOTES : CHAPTER TWELVE

AN ANALYSIS OF OFFICER PARTICIPATION AS A DETERMINANT OF PLAN IMPLEMENTATION

1. SURVEYOR: LOCAL GOVERNMENT TECHNOLOGY (7 JANUARY 1972) London, IPC Business Press Ltd. 1971, p. 34.

2. Plowden, S. (1972) TOWNS AGAINST TRAFFIC London, Andre Deutsch Ltd; pp. 12-15

3. Grant, J. (1977) THE POLITICS OF URBAN TRANSPORT PLANNING London, Earth Resources Research Ltd; p. 47

4. It is interesting to note that a founder member of the Royal Institute of Town Planning is the Institution of Civil Engineers

5. Refer to chapter 2 of this thesis

6. Refer to chapter 2 of this thesis

7. South-East Lancashire and North-East Cheshire Area Highway Engineering Committee (1962) S.E.L.N.E.C.: A HIGHWAY PLAN 1962 Manchester, S.E.L.N.E.C. Area Highway Engineering Committee; pp. iii-1

8. Minister of Transport (1965) ROADS IN ENGLAND AND WALES 1965: H.C.346 London, H.M.S.O; pp. 69-106

9. Crowther, Sir Geoffrey - Chairman (1963) TRAFFIC IN TOWNS: REPORTS OF THE STEERING GROUP AND WORKING GROUP APPOINTED BY THE MINISTER OF TRANSPORT London, H.M.S.O. The Chairman of the Working group was Sir Collin Buchanan and hence the name Buchanan Report

10. The concept of traffic segregation in this manner was first introduced by Sir Alker Tripp Tripp, Sir Alker (1942) TOWN PLANNING AND ROAD TRAFFIC London, Arnold; p. 48

11. Ministry of Transport and the Ministry of Housing and Local Government (1964) BUCHANAN REPORT: CIRCULAR 1/64 London, H.M.S.O.

12. Minister of Transport (1965) ROADS IN ENGLAND AND WALES 1965: H.C.346
London, H.M.S.O; p.21

13. Traffic Research Corporation Limited (1969) MERSEYSIDE AREA LAND USE TRANSPORTATION STUDY (MALTS): FINAL REPORT, REPORT A TO THE STEERING COMMITTEE
11, Rumford Street, Liverpool 2, Traffic Research Corporation Ltd; p. 5 and p. 23

14. Ibid., pp. 38-47

15. Ibid,

16. Ibid; p. 89

17. Refer to P. 7.15 of this thesis

18. The reasons for this minimum participation by the city engineers is discussed in Chapter 11, pp. 6-7 of this thesis. Details of schemes included in the Ministry's principal road preparation list used to be included in the annual publications "ROADS IN ENGLAND AND WALES 1965: LONDON H.M.S.O." These publications ceased to provide this information by 1974, with the introduction of Transportation Policies and Programme documents.

19. Conversation with a senior officer from the Leicester city engineer's department, who formerly liaised with the planning department on the preparation of this Study

20. DoE Memorandum 73/104 as later incorporated in the Local Government Finance Act 1974

21. For a discussion on the results of a decade of application of these pieces of legislation, refer to:
Gwilliam, Professor K. (July 1977) THE CHARTERED INSTITUTE OF TRANSPORT Journal
London, Chartered Institute of Transport, p: 336-338

22. Op.Cit; pp. 40-69

23. Alan M. Voorhees and Associates Ltd. (1972) TYNE WEAR PLAN
London; Alan M. Voorhees and Associates Ltd., 47, Princes Gate; pp 66-67

24. Regional Controller (Planning) Department of the Environment (26 FEBRUARY 1979) STRUCTURE PLAN FOR OXFORDSHIRE Oxford, Oxfordshire County Council; p. xi

25. SURVEYOR: LOCAL GOVERNMENT TECHNOLOGY (4 AUGUST 1972) VOL. CXL NUMBER 4182 London, IPC Business Press Ltd. 1972, p. 1

26. MALTS REPORT: REPORT A TO THE STEERING COMMITTEE; p.iv

27. Solesbury, W. and Townsend A (1970) Transportation Studies and British Planning Practice. TOWN PLANNING REVIEW, VOL. 41

28. Op.cit; p. 103

29. Griffith J.A.G. (1965) CENTRAL DEPARTMENTS AND LOCAL AUTHORITIES London; Royal Institute of Public Administration; pp. 167-219

30. Op.cit; p. 103

31. Grant J. (1977) THE POLITICS OF URBAN TRANSPORTATION PLANNING London; Earth Resources Research Ltd., p. 87

32. Ibid. p. 62

33. Ibid. p. 95

34. This analysis is based on information largely provided in the annual publications of THE MUNICIPAL YEAR BOOK (1964 to 1973) London; The Municipal Journal Ltd., 178-202, Great Portland Street supplemented by personal contacts

CHAPTER THIRTEEN

EFFECT OF LOCAL PRESSURE GROUPS ON IMPLEMENTATION

* * *

* * *

"Two parks at either end of the East Wyke Farm relief road - Hinksey Park and South Park - set two of the major problems in planning the (Oxford Southern Relief) route. Another is, that it would cross the University Rugby ground.

At the Western end, the Consultants (to the Oxford Central Area Study : 1968) considered three lines - through Hinksey Park or through the housing to its north or south.

To take it through would mean destroying the park as a social amenity. The line through Grandpont, they say, seems reasonable, the housing affected being undistinguished and is likely to be redeveloped on a large scale."

- OXFORD ROADS 1968: SUPPLEMENT TO THE OXFORD MAIL, 4TH DECEMBER 1968[1]

"It is stated (by the Consultants) that the exact location (of the Oxford Southern Relief Road) depends on the relative weights to be placed upon the amenities of the (Hinksey) park against loss of housing.

The Association ask what is this relative weight? The consultants have made no assessment of the weighting to be given to housing or amenities in South Oxford and the Association do not want this community and the houses destroyed by either the construction of the road or the noise and fumes of the motorway ..... The area shown in the (Oxford Central Area) Study which is believed to be that with a maximum need for quiet is mainly the University area, whereas those considered to have the minimum need for quiet are the predominantly residential areas. This shows an apparent lack of sensitivity for people's needs and it is questioned whether the consultants conducted social surveys in South Oxford to find out people's attitude to noise and the proposal of having a motorway in their midst. It is believed they used a computer ..... the Association submits that insufficient attention has been paid to the impact of the 2 ground level spur roads on the physical characteristics of the area. It seems that the area of South Oxford will be split into 3 pieces by the spurs and it is thought that this will have a detrimental effect on the community, because of the physical barriers raised to human contacts."

- SOUTH OXFORD COMMUNITY ASSOCIATION (OBJECTOR) AT THE PUBLIC ENQUIRY[2] INTO OXFORD CENTRAL AREA ROAD PLANS : NOVEMBER/DECEMBER 1970

"This objection does not seek to demonstrate that there is no need for these two spur roads, although it would appear that by implication, the need is challenged ..... It is agreed that the construction of the spur roads would have a serious effect on traffic in the area and in the safety of people living in the area, particularly the children ..... It is not suggested by the Objector that the line of the proposed East Wyke Farm Road should be amended at this point ..... The conclusion on this objection is that it has not demonstrated that these spur roads are unnecessary to solve the Oxford traffic problem ..... I recommend that no modification (to the Oxford Central Area Road Plan) be made to meet this objection."

- INSPECTOR'S RECOMMENDATION TO THE SECRETARY OF STATE[3]:
  PUBLIC INQUIRY INTO OXFORD CENTRAL AREA ROAD PLANS: NOV/DEC 1970

The three statements above are given here to highlight respectively the views of the professionals concerned with the planning of motorways in urban areas, the response of the affected community and the equity available to the affected community in the public inquiry procedures.

In this chapter, I describe the means by which local pressure groups safeguarded their interests, when threatened by road proposals and the extent to which their opposition to the proposals led to the under-implementation of the plans. In discussing, I will concentrate on the significance of local group activities that took place after the publication of the plans. This is because pressure group activities do not begin in earnest until after this event.[4,5]

In the next section, I will continue to analyse the pressure group activities that emerged from the Oxford Development Plan Review (1971), in order to illustrate the operation of such acitivities in practice. The Oxford Development Plan Review is one of the very few which was contested by a wide range of community groups,[6] which attracted international attention[7] and on which the final decision was taken at Cabinet level.

Oxford is not typical of cities in England. It is an internationally famous university city, one of the centres of British motor industry, a county town and a regional centre. Plowden has stated that,

"Of all the British town planning disputes, that of Oxford is the most famous, protracted and emotionally charged."[8]

Therefore the pressure-group activities that ensued these proposals can be looked upon as providing a magnified view of similar activities in other towns. The following points are worth noting from this case-study.

Firstly, that for an objection to be successful one must argue against the viability of the proposal rather than on illustrating the losses suffered by the affected party. Cause-groups and self-interest groups belonging to higher socio-economic category (who employed professional assistance) adopted this approach successfully. Secondly, that the more influential groups can bring pressure to bear on the Minister and ultimately on the Cabinet who in that order has the power to over-rule the inspectors. Thirdly, that even fairly moderate changes resulting from objections can result in serious delays and even to subsequent rejection of a major plan.

13.1 CITY OF OXFORD DEVELOPMENT PLAN : PROPOSALS FOR AMENDMENT 1970

The public inquiries into the proposals for the construction of urban motorways in Oxford central area lasted for a period of 36 working days, during the latter half of 1970.[9] Fifty one objections to the scheme were heard during this period, of which 39 represented individuals or public bodies directly affected - ("self-interest groups"). "Cause groups" represented at the Inquiry were the Oxford Civic Society, the Oxford Preservation Trust, the Victorian Society, the Oxford Consumer Group, Oxford City Labour Party, Oxford City Liberal Association and the Oxford Architectural and Historical Society.

The contention of the cause groups, who generally objected to the scheme as a whole, was that the scale of the proposal was too large; that the roads and the car parking structures would adversely affect the appearance of the City and that a better and less expensive road solution incorporating more public transport was possible.

Major modifications were won from the Inspector, by Dr. Thomas Sharp, (a former consultant to the City Council and a proponent of the road through the Christ Church Meadow), partly acting on his private capacity and partly representing the Iffley Road Traders' and Residents Association. He argued amongst other things that,

(i) the proposed relief road did not provide a total solution to the problem, that the implementation of park and ride should be carefully investigated and that the greatest effort must be made to secure that public transport plays a greater role in Oxford.

(ii) no advantage was gained by the proposed large scale scheme, whereas by omitting the extensions to the outer by-passes and introducing restraint, thereby reducing the need for such large scale car parking provision, there would be a saving of some £10 million out of the proposed £31 million. At the same time the impact of the proposed spine road and car parking complexes could be reduced.

(iii) Christ Church Meadow cannot be regarded as having outstanding landscape value. Its special quality lies in the peace and quietness of the Broadwalk which could be safeguarded by planting on the northern side of the proposed road.

However, the then Secretary of State, Mr. Walker, over-ruled his inspector's accommodation for a Meadow Road. Though he accepted the other recommendations in the Inspector's Report, Mr. Walker stated that he did not attach the same value or weighting as the Inspector had, to the various factors involved, and accordingly confirmed the Council's original proposal for the East Wyke Farm Route to the South of the Meadow.

The rejection of his inspector's recommendation for the Meadow Road by Mr. Walker, was widely believed in the City to be due to the lobbying of the Central Government by the University.[10]

The other modifications to the plan by the Secretary of State, although they were accepted by the Council, resulted in design changes and consequent delays to its implementation. The delays subsequently lead to the rejection of the plan by the City Council, when the latter changed hands to the Labour Party.

Other objectors who received major concessions at the inquiry, included the University, its colleges and other educational institutions, an architect acting on his private capacity and the residents of North Oxford. The latter group, comprised of a powerful body of professional and managerial workers. They were able to argue against the extension of the Spine Road to the Northern boundary of the City.

Most of the damaging features of the plan were however contained within the Southern half of the City. The households affected in this area largely belonged to industrial workers of the lower socio-economic groups. They were unable to present alternative solutions to the proposals and were therefore markedly unsuccessful in convincing the Inspector of their case.

In the next section, the above case study will be used for an initial selection of indicators for the effectiveness of pressure group activities.

13.2 INDICATORS FOR THE EFFECTIVENESS OF PRESSURE GROUP ACTIVITIES

We are interested in measuring the effectiveness of local pressure groups in determining the implementation of urban transportation plans. The existing literature does not contain any satisfactory direct measures for this purpose.[11] The Oxford study given above suggested three surrogate variables - spatial intensity of listed buildings, distribution of socio-economic groups and the scale of the proposed transport network. These variables will now be examined in turn regarding their applicability to other studies and further developed, where applicable, as quantitative surrogate measures for the effectiveness of local pressure groups.

13.2.1 Measure of spatial intensity of listed buildings

I estimate, based on information updated to 1978 that there are 1000 buildings in Oxford, 612 in Bath and 258 in Southampton which are listed by the Department of the Environment as buildings of historic or architectural importance.[12] A measure of the intensity of listed building per unit area could give an indication of the probability of road proposals disturbing historic buildings and the willingness of local amenity societies to contest such proposals. However a closer examination of route-location techniques used for a number of road proposals showed that a seiving process was normally used to prevent road proposals

disturbing the "historic core" of the city and other "hard areas".[13] Therefore this measure appeared unsatisfactory for further development.

13.2.2 Socio-economic distribution measure : Hypothesis I

The socio-economic group tables in the Ward Library of the 1966 Ten Percent Sample Census of England and Wales were used to obtain the socio-economic group (SEG) data for this analysis.[14] The seventeen socio-economic groups recognised in this Census were amalgamated into seven groups for the purposes of the standard tabulation in the Ward Library and are reproduced below.

TABLE OF SOCIO-ECONOMIC GROUPS: 1966 CENSUS OF ENGLAND AND WALES

1966 CENSUS SEG	WARD LIBRARY SEG	OCCUPATION OF HEAD OF HOUSEHOLD
3, 4	I	PROFESSIONAL WORKERS
1, 2, 13	II	EMPLOYERS AND MANAGERS IN CENTRAL AND LOCAL GOVERNMENT, INDUSTRY, COMMERCE, ETC. INCLUDING FARMERS
8, 9, 12, 14	III	FOREMAN AND SUPERVISORS (MANUAL), SKILLED MANUAL WORKERS, OWN ACCOUNT WORKERS (OTHER THAN PROFESSIONAL) - THIS INCLUDES OWN ACCOUNT FARMERS WITH NO EMPLOYEES
5, 6	IV	INTERMEDIATE NON-MANUAL WORKERS AND JUNIOR NON-MANUAL WORKERS
7, 10, 15	V	PERSONAL SERVICE WORKERS, SEMI-SKILLED WORKERS AND AGRICULTURAL WORKERS
11	VI	UNSKILLED MANUAL WORKERS
16, 17	VII	MEMBERS OF THE ARMED FORCES AND PERSONS WHOSE OCCUPATIONS WAS INADEQUATELY DESCRIBED

In this table the professional and managerial workers who suffered least from road proposals and gained most concessions through pressure group activities, belong to SEG 1 and SEG II. Those who suffered the most from the location of new roads belonged to SEG V and SEG VI. Dwellings belonging to these latter groups were an easy prey to road construction proposals, as explained below.

The urban roads are generally planned to be located in areas that are ripe for re-development or along the lines of cracks in existing communities. The Minister of Transport, referring to areas ripe for re-development, recommended in the sixties that,
"An important function of the new type of urban plan ..... would be the identification of action areas; that is to say, of those areas where large scale activity would be concentrated in the next ten years and which would therefore need to be planned comprehensively and in detail.[15] This process would help in establishing the relationship between the re-development and the need for highway works and would offer a useful tool in bringing about a closer relationship between the programming of urban road schemes and the phasing of urban re-development. In the meantime, the Ministry is taking increasing account of re-development factors in determining the road schemes in the road programme."

The Urban Motorways Project Team confirmed that the location of urban roads in re-development areas was a widespread practice in the early seventies. Householders in these areas belong mainly to the lower socio-economic groups. It is shown in Fig 13.01 (Table), that the fraction of unskilled manual workers and semi-skilled workers, living within the locality of planned urban roads, in a sample of 13 towns is significantly higher than the average fraction of this class of workers within those towns.

Furthermore, the lower socio-economic groups were least able to safeguard their interests, in the public inquiry procedures.

FIGURE 13.01 (Table)

COMPARISON OF THE FRACTION OF HOUSEHOLDS BELONGING TO SEG (V AND VI) (UNSKILLED MANUAL WORKERS AND SEMI-SKILLED WORKERS) IN WARDS CONTAINING PROPOSED MAJOR ROAD CONSTRUCTION VS THE FRACTION OF HOUSEHOLDS BELONGING TO SEG(V AND VI) FOR THE WHOLE TOWN

This analysis is based on comparing the paired differences of "PLANSEGFRAC (V + VI)" and "TOWNSEGFRAC (V + VI)" for the sample towns

"PLAN SEGFRAC (V +VI)" for a town is defined by, PLANSEGFRAC (V + VI)

$$= \frac{\sum_{\text{All Wards}} \left(\text{SEGFRAC}_{(\text{WARD})} \times \text{COST OF RECOMMENDED SCHEME UP TO 1973/74 IN WARD} \right)}{\sum_{\text{All Wards}} \left(\text{COST OF RECOMMENDED SCHEME FROM FIRST YEAR OF PLAN TO 1973/74 IN WARD} \right)}$$

Where,

$$\text{SEGFRAC}_{(\text{WARD})} = \frac{\text{NO. OF HOUSEHOLDS IN WARD BELONGING TO SEG (V + VI)}}{\text{NO. OF HOUSEHOLDS IN WARD BELONGING TO SEG (I TO VI)}}$$

" TOWN SEGFRAC (V + VI)" FOR A TOWN IS DEFINED BY

$$\text{TOWNSEGFRAC (V + VI)} = \frac{\text{NO. OF HOUSEHOLDS IN TOWN BELONGING TO SEG (V + VI)}}{\text{NO. OF HOUSEHOLDS IN TOWN BELONGING TO SEG (I TO VI)}}$$

THE respective values of "PLANSEGFRAC (V + VI)", "TOWNSEGFRAC (V + VI)" and the paired difference

$$d = (\text{PLANSEGFRAC (V + VI)} - \text{TOWNSEGFRAC (V + VI)})$$

are given below. We wish to test the hypothesis

$$\left.\begin{array}{l} H_0 : \mu_d = 0 \\ H_1 : \mu_d > 0 \end{array}\right\} \quad \text{One-tailed test}$$

where μ_d= sum of the measures 'd' for the population.

We test this hypothesis, by comparing the statistic

$$t = \frac{\bar{d} - \mu_d}{s_d / \sqrt{(n-1)}}$$

FIGURE 13.01 (Table)

COMPARISON OF THE FRACTION OF HOUSEHOLDS BELONGING TO SEG (V AND VI) (UNSKILLED MANUAL WORKERS AND SEMI-SKILLED WORKERS) IN WARDS CONTAINING PROPOSED MAJOR ROAD CONSTRUCTION VS THE FRACTION OF HOUSEHOLDS BELONGING TO SEG(V AND VI) FOR THE WHOLE TOWN

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Where,

$$SEGFRAC_{(WARD)} = \frac{\text{NO. OF HOUSEHOLDS IN WARD BELONGING TO SEG (V + VI)}}{\text{NO. OF HOUSEHOLDS IN WARD BELONGING TO SEG (I TO VI)}}$$

" TOWN SEGFRAC (V + VI)" FOR A TOWN IS DEFINED BY

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THE respective values of "PLANSEGFRAC (V + VI)", "TOWNSEGFRAC (V + VI)" and the paired difference

$$d = (\text{PLANSEGFRAC (V + VI)} - \text{TOWNSEGFRAC (V + VI)})$$

are given below. We wish to test the hypothesis

$$\left.\begin{array}{l} H_0 : \mu_d = 0 \\ H_1 : \mu_d > 0 \end{array}\right\} \quad \text{One-tailed test}$$

where μ_d= sum of the measures 'd' for the population.

We test this hypothesis, by comparing the statistic

$$t = \frac{\bar{d} - \mu_d}{s_d / \sqrt{(n-1)}}$$

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This analysis is based on comparing the paired differences of "PLANSEGFRAC (V + VI)" and "TOWNSEGFRAC (V + VI)" for the sample towns

"PLAN SEGFRAC (V +VI)" for a town is defined by, PLANSEGFRAC (V + VI)

$$= \frac{\sum_{\text{All Wards}} \left(SEGFRAC_{(WARD)} \times \text{COST OF RECOMMENDED SCHEME UP TO 1973/74 IN WARD} \right)}{\sum_{\text{All Wards}} \left(\text{COST OF RECOMMENDED SCHEME FROM FIRST YEAR OF PLAN TO 1973/74 IN WARD} \right)}$$

Where,

$$SEGFRAC_{(WARD)} = \frac{\text{NO. OF HOUSEHOLDS IN WARD BELONGING TO SEG (V + VI)}}{\text{NO. OF HOUSEHOLDS IN WARD BELONGING TO SEG (I TO VI)}}$$

" TOWN SEGFRAC (V + VI)" FOR A TOWN IS DEFINED BY

$$TOWNSEGFRAC\ (V + VI) = \frac{\text{NO. OF HOUSEHOLDS IN TOWN BELONGING TO SEG (V + VI)}}{\text{NO. OF HOUSEHOLDS IN TOWN BELONGING TO SEG (I TO VI)}}$$

THE respective values of "PLANSEGFRAC (V + VI)", "TOWNSEGFRAC (V + VI)" and the paired difference

$$d = (\text{PLANSEGFRAC (V + VI)} - \text{TOWNSEGFRAC (V + VI)})$$

are given below. We wish to test the hypothesis

$$H_0 : \mu_d = 0$$
$$H_1 : \mu_d > 0 \quad \text{One-tailed test}$$

where μ_d = sum of the measures 'd' for the population.

We test this hypothesis, by comparing the statistic

$$t = \frac{\bar{d} - \mu_d}{s_d / \sqrt{(n-1)}}$$

Where $\bar{d}$ and s_d are the mean and standard deviation of the n(= 13 in this case) differences, AGAINST the Students "t" value with ν = n-1 degrees of freedom, at the chosen level of significance. μ_d is assumed to be zero i.e.; assume "null hypothesis" to be true.

TOWN	PLANSEGFRAC	TOWNSEGFRAC	d	d^2
LIVERPOOL	0.537	0.357	0.180	0.0324
BOOTLE	0.496	0.422	0.074	0.0055
BIRKENHEAD	0.332	0.326	0.006	0.0000
WALLASEY	0.188	0.258	-0.070	0.0049
BOLTON	0.345	0.307	0.038	0.0014
SALFORD	0.398	0.336	0.062	0.0038
BURY	0.221	0.254	-0.033	0.0011
OLDHAM	0.378	0.335	0.043	0.0018
ROCHDALE	0.302	0.317	-0.015	0.0002
MANCHESTER	0.372	0.296	0.076	0.0058
SOUTHAMPTON	0.283	0.277	0.006	0.0000
OXFORD	0.363	0.303	0.060	0.0036
NOTTINGHAM	0.462	0.326	0.136	0.0185
			$\Sigma d = 0.563$	$\Sigma d^2 = 0.0790$
			$\frac{\Sigma d}{n} = 0.0433$	$\frac{\Sigma d^2}{n} = 0.0061$
			$= \bar{d}$	less
				$\bar{d}^2 = 0.0019$
				0.0042
				$s_d = (\frac{\Sigma d^2}{n} - \bar{d}^2)^{\frac{1}{2}} = \sqrt{0.0042}$
				$= \underline{\underline{0.0648}}$

$$t = \frac{0.0433}{0.0648/\sqrt{12}} = 2.315 \text{ with } 12 \text{ d.f.}$$

Since $t_{0.95}(12) = 1.782$,
the result is significant at the 0.05 level and we state with 95 percent confidence that there was a significant preference for locating roads through lower SEG wards.

In the sixties, opportunities were afforded to the public to object to the road plans normally in two stages.[17] The initial stage was a public inquiry held by the Minister to hear objections to amending the local Development Plan, so as to incorporate the recommendations of a landuse-transportation study. A second inquiry was held to hear any objections to compulsory purchase orders and side road orders, necessitated by the individual road schemes.

Householders in the lower socio-economic groups were generally least able to organise themselves into successful pressure groups with sufficient time, money and expertise to represent themselves in public inquiries. The comprehensive redevelopment areas in the inner cities contain a large proportion of tenants (belonging to lower socio-economic groups) living in houses owned by the Council which proposed the highway construction, or by private or other public authority landlords.[18] The negotiations, whether inter-departmentally or with the other owners, to purchase these properties are taken to a fairly advanced stage before the tenants are informed of the purchase. Even at present, tenants who pay their rent on a monthly or more frequent interval cannot be statutory objectors in a public inquiry.[19]

Examples to illustrate the theme that the householders in the lower socio-economic group were comparatively easy prey to urban road proposals will now be given.

The Western Approach Road in Southampton was built through an area of bad housing, occupied largely by socio-economic groups V and VI - manual and semi-skilled workers from the City's docks. The scheme did not meet with any objections from organised pressure groups. Similarly in Liverpool, urban schemes that were successfully completed are concentrated in the Central Ward of the City. This electoral ward, had in 1966, over 60 percent of households belonging to socio-economic groups V and VI (SEG V and VI) and less than 5 percent belonging to SEG I and II. This compares with a City average of 36 percent for SEG V and VI and 10 percent for SEG I and II. The Merseyside Area Land Use Transportation Study also recommended that the construction of the Liverpool Inner Ring Road should begin by 1970/71.[20] This scheme was also partly contained in the Central Ward. However the Inner Ring Road proposals affected nearby properties belonging to a powerful group of companies operating as retailers within the City. Their objection resulted in delays to the Inner Ring Road for a period of 9 years and the work on a reduced scale of the original plan only began in 1979/80.

All the above, lead to the hypothesis that;

HYPOTHESIS I: There is a significant correlation between a pressure group's ability to resist the implementation of transportation plans and the socio-economic distribution of the households in the area affected by the proposed plans.

The statistical examination of this hypothesis will be given in section 13.3. In the next sub-section, I will proceed with the development of the third and final surrogate variable - the scale of the proposed transport network.

13.2.3 A measure based on the scale of proposed transport network: Hypothesis II

The effectiveness of pressure groups depends on the quality of the membership and on the quantity of support attracted to resist the urban transport, mainly road, proposals.

The Report of the Urban Motorways Project Team suggests that at ground level, a 3 lane dual-carriageway urban motorway in an inner city area would displace some 300 to 450 dwellings per kilometre length.[21] My examination of several schemes suggests that a single 2 lane road at ground level would affect less than 20 percent of the above number households. This latter road would cost not more than 10 percent of the motorway. Thus larger and therefore costlier schemes affect a larger number of properties per kilometre length. Costlier schemes should therefore lead to bigger self-interest pressure groups. Expensive urban motorway schemes also alienated the 'cause' groups. In the period of interest, they accepted the construction of only modest road network complemented by traffic restraint and improved public transport facilities.[22]

Even Stephen Plowden, the ardent proponent of area-wide traffic management and restraint agreed that,
"there will certainly be a need for some new roads, since otherwise it is doubtful whether the various (traffic management) measures described .... could be implemented. In particular, to create attractive local centres which are convenient for pedestrians may not be possible without considerably re-building them and their road system."[23]

John Grant, dealing with transportation planning in three U.K. boroughs noted that larger schemes did generate greater opposition.[24] All the above lead to the hypothesis that;

HYPOTHESIS II: There is a significant correlation between the level of destruction inflicted by road proposals on a town (in comparison with the size of the town) and the level of implementation of the plan.

13.3 INFLUENCE OF SEG DISTRIBUTION ON IMPLEMENTATION: STATISTICAL EXAMINATION OF HYPOTHESIS I

The 1966 Census data provides SEG distribution at three levels of aggregation - enumeration districts (E.D.), local government electoral wards and county boroughs. I first completed a pilot study to determine the appropriate fineness at which the examination of SEG data should be undertaken for the main study. The following reasons were revealed by the pilot study to justify the examination of SEG values at the county borough level. Reasons to reject the examination at ward or enumeration district levels are first given below. This is followed by the justification for examining SEG values at county borough level.

13.3.1 Reasons for rejecting the examination of SEG distribution at E.D. or ward levels

(i) Comprehensive development areas, which contain most of the urban motorway proposals, are usually located within the inner city, adjacent to the central business districts.[25] Therefore the proposals will invariably have some impact on business premises. Owners of affected business premises, even in small numbers are well placed to resist or delay the implementation of road schemes. Moreover, the census data for the inner city, is particularly unsatisfactory in reflecting the ownership interests of the premises located therein. However, it is the owners who negotiate the compensation and have the major statutory rights at public inquiries.[26]

(ii) It is sometimes possible to locate urban road projects closely following a railway line or other natural crack existing in a community. Under these circumstances a community, irrespective of its socio-economic distribution, may not be willing or able to fight such a project, indeed they may welcome the project for its convenience. It is unrealistic to compare such projects with those having a direct impact on residents, suggesting that at best, SEG analysis can only be a crude indicator of the social resistance likely to develop.

(iii) Except in a few well publicised cases, such as Oxford and Nottingham, successes of local pressure groups were fairly limited, particularly until the mid-seventies. Christopher Hall and Dilys Hill are amongst several authors to subscribe to this point of view.[27,28] Even in the case of Oxford Development Plan Inquiry, of the 51 objections only 5 resulted in recommendations by the Inspector to make amendments to the plan.[29]

For these reasons, I concluded that an extensive research involving the analysis of SEG distributions, at enumeration district or ward level was not justified.

13.3.2 Reasons for accepting the examination of SEG distribution at county borough level

(i) Public Inquiries, particularly into an amendment to a development plan, normally relate to a group of proposals, as submitted by a Council.

The proposals can either be approved by the Minister or can be referred back to the Council with recommendations for amendments and a subsequent public inquiry into the amended proposals. Normally, the Minister has no power to amend a plan without an inquiry.

Under the circumstances, the referral of the submitted proposals, because an objection to one part of a road proposal by a higher socio-economic group was sustained would bring indirect benefits to all the affected parties. For example, at the public inquiry into the Amendment to the Development Plan for Nottingham (1970), the proposals for Sheriffs Way was successfully resisted by the city centre shop owners. The residents of St. Ann's Ward in Nottingham, whose dwellings were to be demolished for the Inner Ring Road also benefited from their success, because the amendment proposals were remitted as a whole to the City Council.[30]

Thus in towns with a large proportion of higher socio-economic groups and a low proportion of socio-economic groups V and VI, there is a better chance of whole proposals being referred back after a public inquiry and subsequently delayed.

(ii) Local amenity societies are concerned with the amenity of their town as a whole and operate on this basis. Particularly, before the mid-seventies, they accepted a reasonable amount of road building as necessary. They rather concentrated their efforts on resisting large-scale road construction and in safe-guarding buildings of historic and architectural importance. These buildings are normally owned by the higher socio-economic groups. Also the membership of the societies is predominantly made up of socio-economic groups I and II (SEG I and II).

In the sixties, the Civic Society, for instance supported the principle of an Inner Ring Road for the City of York to reduce traffic in the conservation areas. It was not until the mid-seventies, that most of the amenity societies changed their views to favour extensive traffic restraint and public transport based policies in urban areas.

I have therefore decided that the analysis of SEG distribution at county borough level would be useful in studying the influence of pressure groups on the implementation of urban transportation plans.

12.3.3 Examination of SEG distribution at county borough level

Christopher Hall writing on "How to run a pressure group" stated that,

"The spectacular success of a few groups misleads people into supposing that the position of the ad hoc pressure group is now secure.[31] The most notable of such success was the Victory of the Wing Airport Resistance Association. But W.A.R.A. represented an affluent middle-class constituency (though at times it did its best to disguise itself as a bunch of tractor-driving yokels). It was never short of money or unpaid professional advice ..... It fought a selfish campaign. It did not merely say "No Wings over Wing" (the campaign slogan); it pressed for the airport to be sited on Foulness where the few hundred inhabitants were mostly old age pensioners and powerless to mount an effective reply."

This example is also found to be valid in the case of urban motorway route location. An efficient way of winning a public inquiry is for the objectors to show the existence of a cheaper but equally satisfactory alternative to the proposed road. The opportunity to present such alternatives are greatest when there are large areas inhabited by lower SEG groups.

Therefore it seems reasonable to conclude that the quality of social resistance (SR) at the county borough level can be measured as the inverse of the difference in proportion of the lowest and the highest socio-economic groups. Thus,

$$SR = \frac{1}{(SEGFRAC(V + VI) - SEGFRAC (I + II))} \text{ where}$$

SEGFRAC (V + VI) = FRACTION OF POPULATION IN SOCIO-ECONOMIC GROUPS (V + VI) TO SEG (I TO VI) IN A TOWN

SEGFRAC (I + II) = FRACTION IN POPULATION OF SOCIO-ECONOMIC GROUPS (I + II) TO SEG (I TO VI) IN A TOWN

13.3.4 Statistical proof of Hypothesis I:

Hypothesis I will now be restated with a minor modification as that "there is a significant correlation between the ability of pressure groups to resist the implementation of transportation plans and the socio-economic distribution of households within the town affected by the proposed plans."

The evidence for this hypothesis is based on showing the existence of a significant co-relation between the independent variable SR and the dependent variable FMR. The variable SR is defined above and the variable FMR is defined as before.

A scatter graph of FMR VS. SR for the 23 towns in the sample is given in Fig 13.2 (Grph) The statistical analysis produced a fairly low degree of correlation (coefficient of correlation = -0.41). The reasons for this low degree of correlation was discussed earlier. Essentially there are (a) the limited influence of local pressure groups on the implementation of transportation studies, (b) that even the higher socio-economic groups do welcome proposals within their midst, under certain circumstances (see Sections 12.2.1 (ii and iii), (c) socio-economic distribution can only partially explain the influence of pressure groups on the implementation of plans. The rest of the explanation would rest on the scale of the proposals (see section 13.2.3). This will now be examined.

FIGURE 13.01 (GRAPH)

SOCIAL RESISTANCE (SR) .VS. IMPLEMANTATION RATIO (FMR)

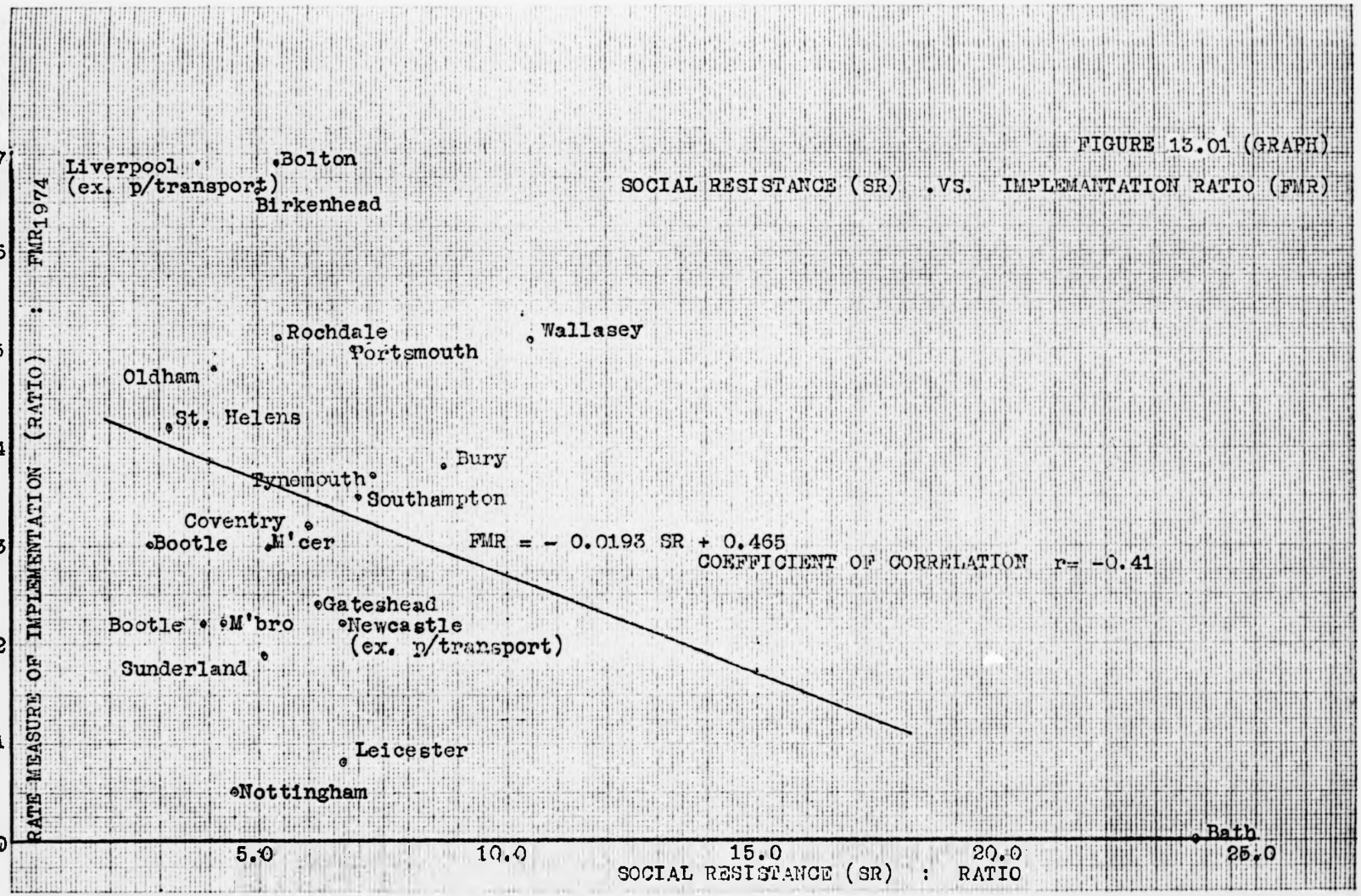
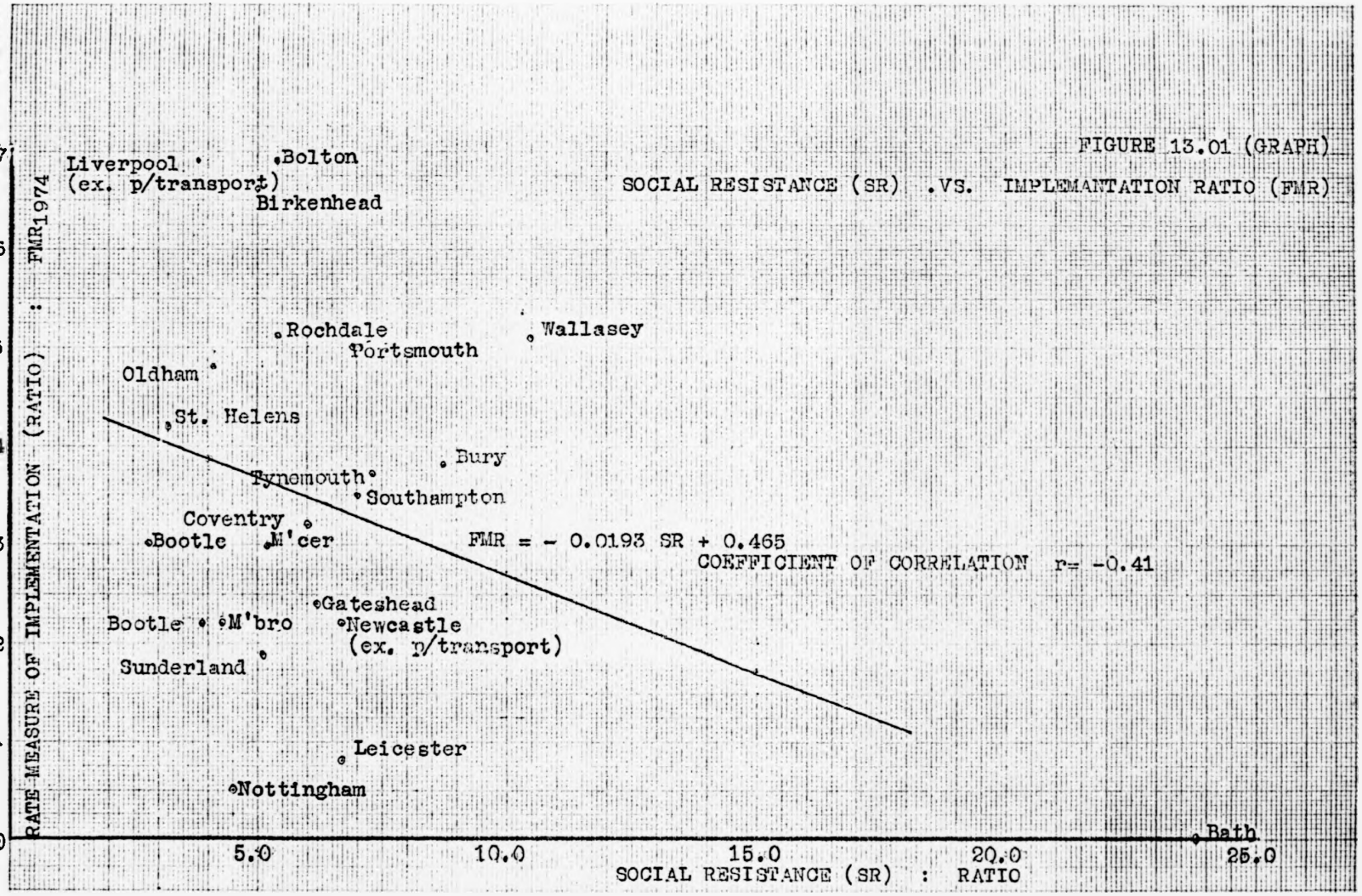


FIGURE 13.01 (GRAPH)

SOCIAL RESISTANCE (SR) .VS. IMPLEMAINTATION RATIO (FMR)



13.4 INFLUENCE OF THE SCALE OF PROPOSALS ON THE IMPLEMENTATION: STATISTICAL EXAMINATION OF HYPOTHESIS II

This hypothesis stated that "there is a significant correlation of negative sign between the level of destruction inflicted by road proposals on a town (in comparison with the size of the town) and the level of implementation of the plan.

The proof of this hypothesis needs as the independent variable a measure for the level of destruction inflicted on a town compared with the size of the town. The measure of destruction is taken to be the estimated cost of the road network to be implemented from the first year of the plan to 1973/74. The suitability of using the cost of proposals for this measure was discussed in section 12.1.3.

Two variables were examined to represent the size of a town - its administrative area and its population. The population was chosen because it appeared to directly represent the potential for forming pressure groups. In some cases, such as locating a road through a "green field site" in a sparsely populated part of a county borough (Eg. Rochdale) or a tunnel under an estuary (Eg. Liverpool), an area measure would have been useful.

Thus a variable to represent the social resistance to the destruction inflicted on a town is defined by a "cost resistance measure" - CR

$$CR = \frac{\text{(ANNUAL AVERAGE COST OF INFRASTRUCTURE IN £MILLIONS RECOMMENDED BY THE STUDY UP TO 1973/74)}}{\text{(POPULATION OF THE TOWN IN MILLIONS)}}$$

It is worth noting that CR varies over a range of 1 to 14 despite the constant per head of capital expenditure/head of population/ year intended by the Ministry. The dependent variable is FMR.

FIGURE 13.02 (GRAPH)

COST RESISTANCE (CR) .VS. IMPLEMENTATION RATIO (FMR)

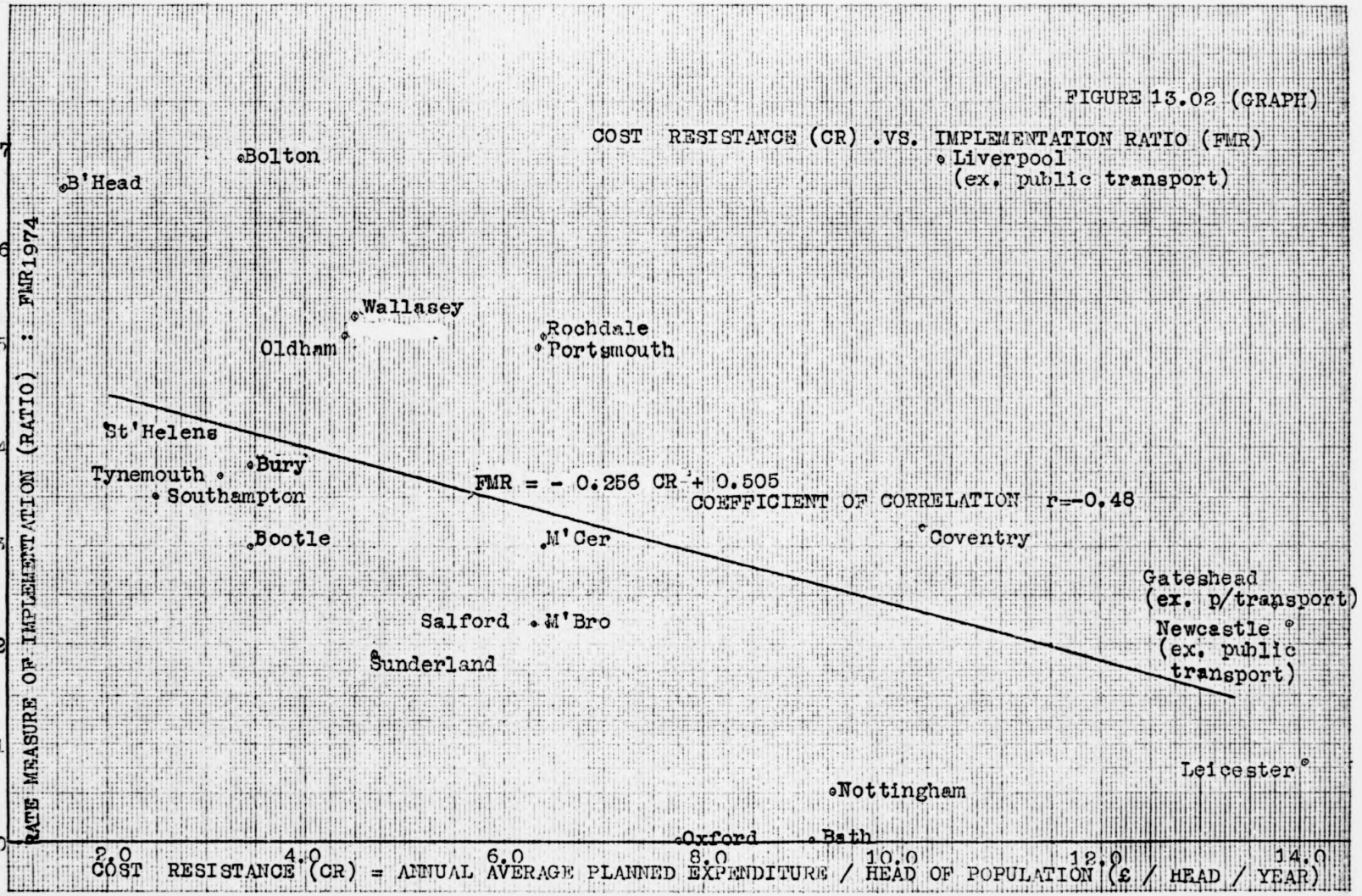
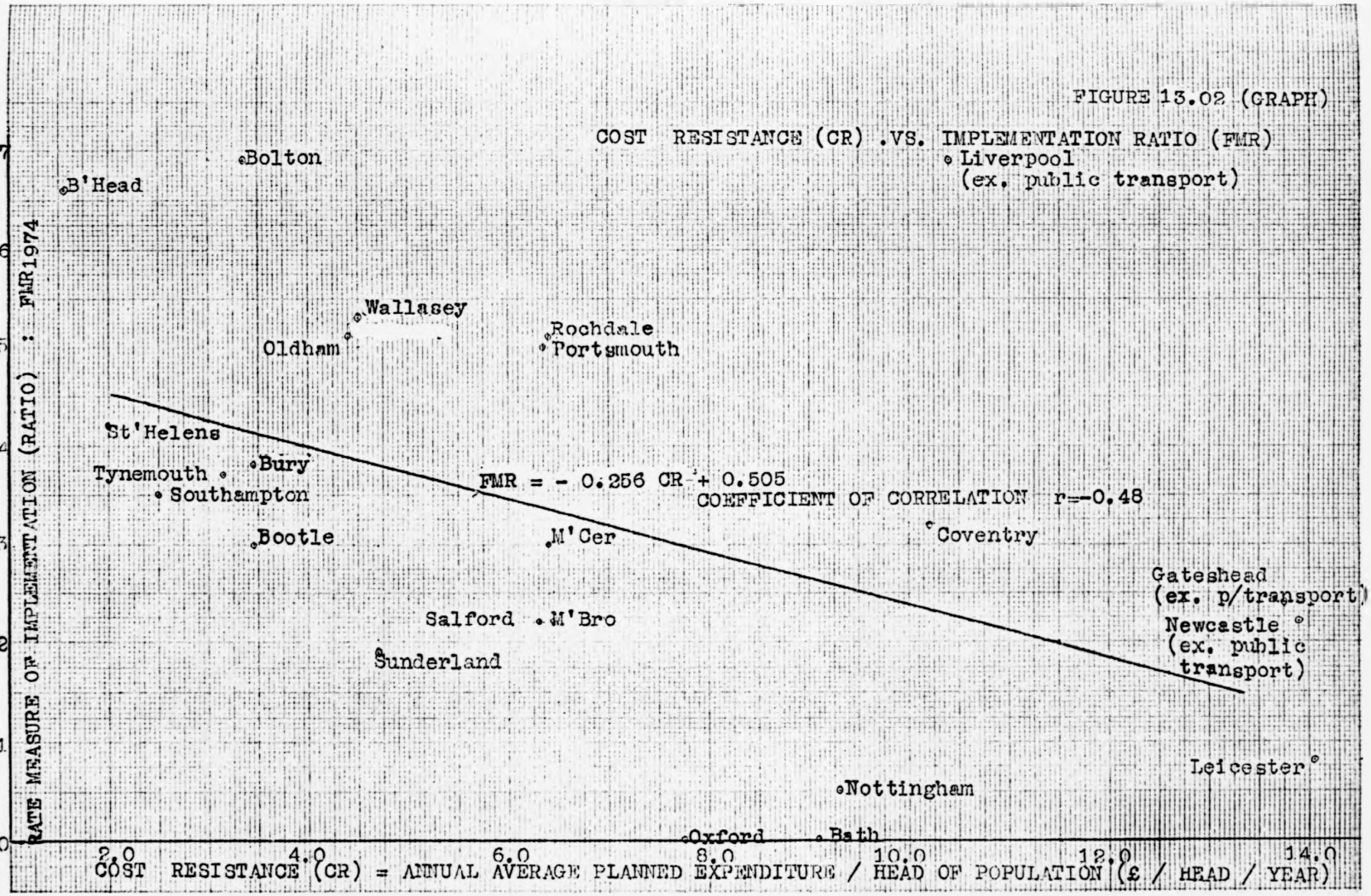


FIGURE 13.02 (GRAPH)



A scatter graph of FMR VS. CR for the 23 towns in the sample is given in figure 13.03 (graph) which show a degree of negative correlations (= -0.48) as expected.

This level of correlation with 23 degrees of freedom is significant at 6 per cent level in a t-test for small samples.

The variable CR will now be combined with the variable SR, to produce a single variable "SOCIAL COST RESISTANCE" (SCR) to explain the total influence of pressure groups in the implementation of transport plans.

13.5 COMBINATION OF VARIABLES SR AND CR

The cost resistance variable CR can be largely looked upon as a quantity measure of public resistance. It should therefore be possible to introduce a measure of quality to CR by multiplying this variable by SR. Thus,

SOCIAL COST RESISTANCE SCR = COST RESISTANCE (CR) x
SOCIAL RESISTANCE (SR)

The scatter graph of SCR VS. FMR for the 23 towns in the sample is given in 13.04 (graph) which shows a marked degree of negative correlation. The linear equation,

FMR = -0.00259 SCR + 0.458

was fitted to this scatter graph. 35 percent of the variation in FMR (coefficient of correlation = -0.59) can be explained by its association with SCR. This level of correlation with 23 degrees of freedome is significant at less than 5 per cent level for a two tailed t-test for small examples.

An interesting aspect of this scatter graph is that the points on its outer boundary (shown dotted in fig. 12.03) suggest the natural existence of 2 discrete curves. The dotted curve represents a set of seven studies which had a relatively lower impact on the community compared with similar cost schemes produced by the second set of 16 towns. Much of the expenditure on the first set was associated with tunnels or bridges in Merseyside and Tyneside, for reclaimed land in the case of Portsmouth and in providing the highways after the heavy war damage in Coventry. Had the cost of major tunnels and bridges

FIG. 13.04

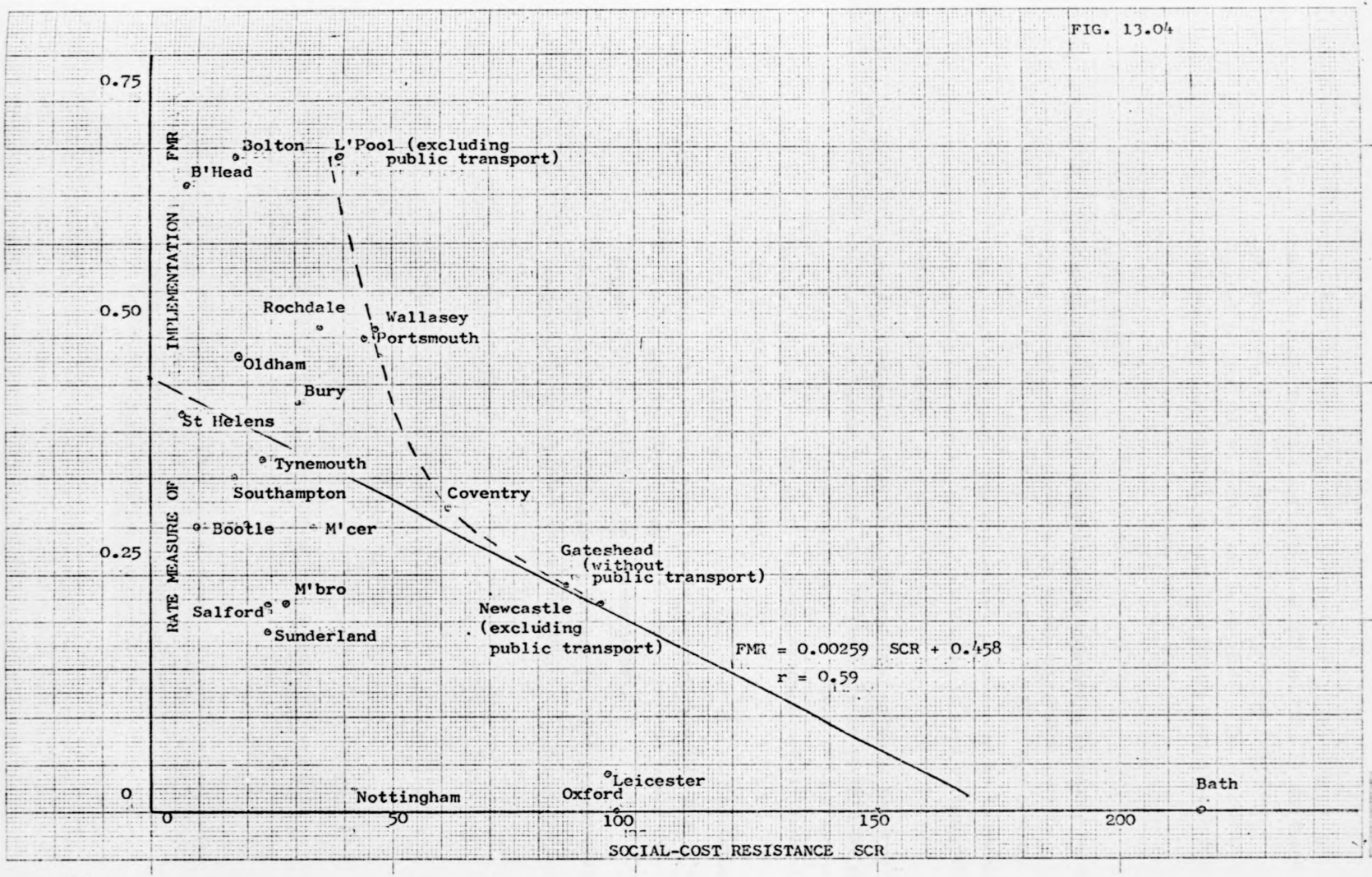
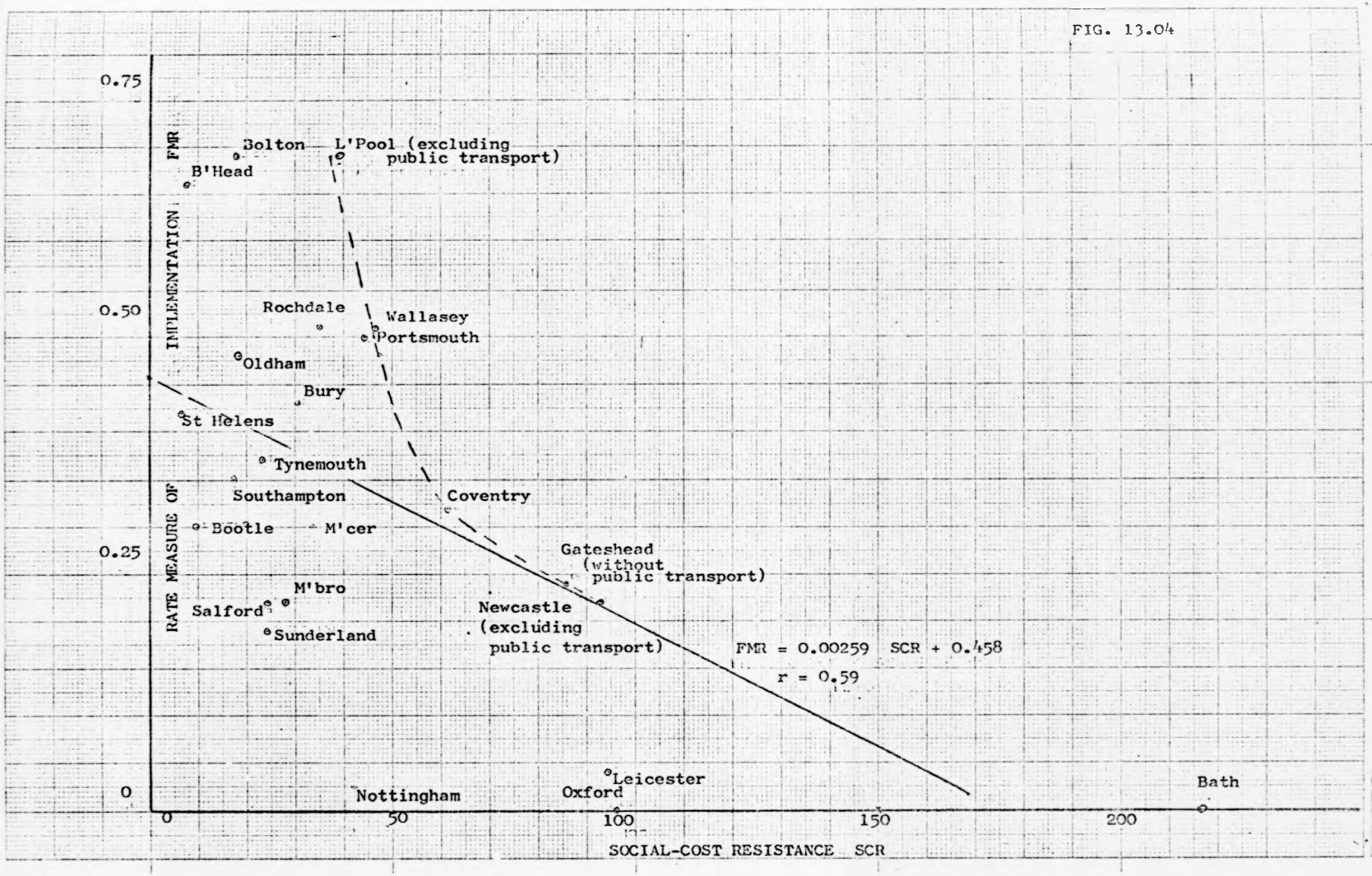

0.75
0.50
0.25
0
FMR
IMPLEMENTATION
RATE MEASURE OF
Bolton
B'Head
L'Pool (excluding public transport)
Rochdale
Wallasey
Portsmouth
Oldham
Bury
St Helens
Tynemouth
Southampton
Coventry
Bootle
M'cer
Gateshead (without public transport)
M'bro
Salford
Sunderland
Newcastle (excluding public transport)
FMR = 0.00259 SCR + 0.458
r = 0.59
Nottingham
Oxford
Leicester
Bath
0
50
100
150
200
SOCIAL-COST RESISTANCE SCR

FIG. 13.04


0.75
0.50
0.25
0
IMPLEMENTATION FMR
RATE MEASURE OF
Bolton
L'Pool (excluding public transport)
B'Head
Rochdale
Wallasey
Portsmouth
Oldham
Bury
St Helens
Tynemouth
Southampton
Coventry
Bootle
M'cer
Gateshead (without public transport)
M'bro
Salford
Sunderland
Newcastle (excluding public transport)
FMR = 0.00259 SCR + 0.458
r = 0.59
Nottingham
Leicester
Oxford
Bath
0
50
100
150
200
SOCIAL-COST RESISTANCE SCR

been excluded from the definition of SCR and FMR, in the cases of Liverpool, Wallasey, Gateshead, Newcastle and Bath then a better fit for the 23 points can be obtained. The fraction of the variation in FMR that is explained by the variation in SCR rises from 35 percent to 46 percent in this case.

13.6 CONCLUSION

Socio-economic-group distribution of households at county borough level can be used in the form of SOCIAL RESISTANCE (SR) to measure the quality of pressure group activities that will be developed in a town. Its explanatory power cannot be increased by using socio-economic group distribution at ward or enumeration district levels.

The scale of destruction of a proposed road network, measured in terms of the annual average cost of proposals up to 1973/74, per head of population (COST RESISTANCE, CR) proved to be a second useful measure for the scale of pressure group activities against implementing transport plans.

SOCIAL COST RESISTANCE (SCR), the product of the cost resistance variable (CR) and the social resistance variable (SR) proved to be a single satisfactory variable, in explaining the impact of pressure group activities on implementation.

The variable SCR will be carried forward for multiple regression analysis, to be completed in chapter 14.

13.7 NOTES

1. OXFORD MAIL : OXFORD ROADS 1968 - SUPPLEMENT (4th December 1968) Oxford

2. Clarke, S R (1971) INQUIRY INTO OBJECTIONS AND REPRESENTATIONS: PROPOSALS FOR ALTERATIONS AND ADDITIONS TO THE CITY OF OXFORD DEVELOPMENT PLAN
Bristol, Department of the Environment (unpublished report); pp 129-30.

3. Ibid ; pp 131-32

4. Holliday J (1973) CITY CENTRE REDEVELOPMENT
London, Charles Knight and Co Ltd pp 215-216

5. Green, BSR (1968) COMMUNITY DECISION MAKING IN GEORGIAL CITY
Unpubl. Ph D Thesis
Bath, University of Tech; p 66

6. For instance it was quoted in, Scott Wilson Kirkpatrick and Partners (1968) OXFORD CENTRAL AREA STUDY, para 1.11, that an Archbishop of Canterbury has maintained that 'the real worth and integrity of this nation will be judged in future ages by what we do or do not do to rescue Oxford."

7. For instance refer to the large volume of Denis Munby's collection on Oxford roads held in the Oxford Central Library.

8. Plowden S (1972) TOWNS AGAINST TRAFFIC
London WC1, Andre Deutsch, p 58

9. Clarke S R; op cit

10. This view is generally held by a number of officers who participated in the Development Plan Inquiry

11. Grant J (1974) THE POLITICS OF URBAN TRANSPORT PLANNING
London, Earth Resources Research Ltd; p 41

12. Details of Grade I, II and III listed buildings are published and regularly updated by the Department of the Environment

13. Ministry of Housing and Local Government (1967) CIVIC AMENITIES ACT 1967 - PARTS I & II CIRCULAR 53/67 (MOHALG)
London, HMSO pp 9-11

14. OFFICE OF POPULATION CENSUSES AND SURVEYS : SMALL AREA STATISTICS - WARD LIBRARY (1966 CENSUS) FAREHAM, HANTS (Tel 03294 42511): OPCS

15. Minister of Transport (1966) ROADS IN ENGLAND AND WALES 1965
LONDON, HMSO; p 16

16. Department of the Environment (1973) REPORT OF THE URBAN MOTORWAYS PROJECT TEAM TO THE URBAN MOTORWAYS COMMITTEE
London, HMSO, p 4

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LONDON, HMSO; p 16

16. Department of the Environment (1973) REPORT OF THE URBAN MOTORWAYS PROJECT TEAM TO THE URBAN MOTORWAYS COMMITTEE
London, HMSO, p 4

17. Ibid; pp. 254-281

18. Royal Town Planning Institute (March 1979) LAND VALUES AND PLANNING IN THE INNER AREAS: FINAL REPORT OF THE WORKING PARTY LONDON (26, PORTLAND PLACE) R.T.P.I; pp. 20-21.

19. The Department of the Environment has published a series of 5 booklets under the general title "LAND COMPENSATION: YOUR RIGHTS EXPLAINED". These are:

    (i) YOUR HOME AND COMPULSORY PURCHASE (1979) H.M.S.O.
    (ii) YOUR HOME AND NUISANCE FROM PUBLIC DEVELOPMENT (1979), H.M.S.O.
    (iii) YOUR BUSINESS AND PUBLIC DEVELOPMENT (1979), H.M.S.O.
    (iv) THE FARMER AND PUBLIC DEVELOPMENT (1974), H.M.S.O.
    (v) INSULATION AGAINST TRAFFIC NOISE (1978), H.M.S.O.

    3 other booklets, published by the D.O.E. are also useful in this respect.

    (i) PUBLIC INQUIRIES INTO ROAD PROPOSALS (1974), H.M.S.O.
    (ii) COMPULSORY PURCHASE ORDERS: A GUIDE TO PROCEDURE (1978), H.M.S.O.
    (iii) LAND COMPENSATION: YOUR RIGHTS EXPLAINED (1973), H.M.S.O.

20. Traffic Research Corporation Limited (June 1969) MERSEYSIDE AREA LANDUSE/TRANSPORTATION STUDY: FINAL REPORT - REPORT A TO THE STEERING COMMITTEE
    LIVERPOOL-2 (11, RUMFORD STREET: TEL: 051-236 6397): M.A.L.T.S; p: xiii.

21. Op.cit; p. 218 and p. 278

22. For instance, refer to Section 8.2.4

23. Plowden, S. (1972) TOWNS AGAINST TRAFFIC
    London, Andre Deutsch Limited; p. 143

24. Grant, J. (1977) THE POLITICS OF URBAN TRANSPORT PLANNING
    London, Earth Resources Research Ltd; pp. 104-105.

25. Royal Town Planning Institute (March 1979) LAND VALUES AND PLANNING IN THE INNER AREAS: FINAL REPORT OF THE WORKING PARTY LONDON, R.T.P.I; pp. 24-25.

26. D.O.E. (ref. 18); op.cit.

27. Hall, C. (1974) HOW TO RUN A PRESSURE GROUP
London, J.M. Dent and Sons Ltd; p. 7.

28. Hill, D.M. (1970) PARTICIPATING IN LOCAL AFFAIRS
London, Penguin Books Ltd; pp. 63-67.

29. I have based this on the examination of the Inspector's Report.
Clarke, S.R; op.cit.

30. Telling, A.E. (1971) NOTTINGHAM: INQUIRY INTO AN AMENDMENT TO THE DEVELOPMENT PLAN
Bristol, Department of the Environment (unpublished report); pp.

31. Hall, C. (1974) loc. cit.

26. D.O.E. (ref. 18); op.cit.

27. Hall, C. (1974) HOW TO RUN A PRESSURE GROUP
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28. Hill, D.M. (1970) PARTICIPATING IN LOCAL AFFAIRS
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30. Telling, A.E. (1971) NOTTINGHAM: INQUIRY INTO AN AMENDMENT TO THE DEVELOPMENT PLAN
Bristol, Department of the Environment (unpublished report); pp.

31. Hall, C. (1974) loc. cit.

CHAPTER FOURTEEN

CUMULATIVE INFLUENCE OF LOCAL FACTORS : ANALYSIS OF PRIMARY FACTORS BY MULTIPLE REGRESSION AND COMMENTS ON SECONDARY FACTORS

* * *

* * *

In the last three chapters, local political continuity, chief-engineer continuity and pressure group effectiveness were identified as the primary factors influencing the implementation of urban transportation studies. In this chapter, I examine the cumulative influence of these three variables by using multiple regression techniques and proceed further to identify and comment on the effects of other secondary factors.

The combination of the variables in this manner is useful for several purposes. Firstly, it allows us to use all three independent variables, acting jointly, to explain the variation of the dependent variable - the rate measure of implementation. Secondly, we can determine the level of impact of the individual variables on the implementation of plans. Finally, this analysis helps to isolate those studies in the sample, whose rate measure of implementation cannot be significantly explained in terms of the three independent variables. These latter studies will be individually examined in order to identify the special circumstances that led to significantly unexplained variations.

14.1 COMBINATION OF VARIABLES: HYPOTHESIS I

Case studies have been commonly used in the past, to examine the nature of decision making in local government. A few of these case studies have identified one or more of the three factors, local political continuity, chief-engineer continuity and pressure-group activities as important in local government decision-making.

Grant reporting on the "Politics of Urban Transport Planning" concluded that,

"there is generally a close relationship between the factors (political technical and community actors) ... to influence the transportation planning and policy making process and the transport policies which developed in each city."[1]

However, as with other case studies on such subjects, he was unable to analyse the cumulative impact of the factors, nor more importantly to allow for "double counting" of the individual effects.

In order to examine the cumulative influence of the factors, we state the hypothesis that,

HYPOTHESIS I: There is a casual relationship between the variation of urban transportation plan implementation and the three measures of local influence - political continuity, chief-engineer continuity and the propensity to form pressure groups - taken together.

In this analysis, difficulties arise with a plan containing a recommendation for large scale expenditure on public transport infrastructure and also where there is a non-linear relationship between the dependent and independent variables. Procedures for handling these situations are described below.

14.2 TREATMENT OF PUBLIC TRANSPORT INFRASTRUCTURE

Recommendations for the provision of substantial public transport infrastructure were made in 4 of the towns - Liverpool, Birkenhead, Newcastle and Gateshead, contained in the 23 town sample. In the case of Liverpool and Birkenhead the rate measures of implementation (FMR) of public transport recommendations were not very different from the FMR for highway infrastructure recommendations. However, inclusion of public transport recommendations would increase the FMR up to 1974, for Newcastle and Gateshead from 22 and 24 percent to 35 and 30 percent respectively. Public transport recommendations are excluded from the multiple regression analysis for the following reasons.

(i) During the period under consideration, provision of large-scale public-transport infrastructure was supported by the Central Government as an innovation in a few towns. Capital sums over and above the cash limits for road construction were allocated so that the road-construction capital provisions were largely unaffected.[2] Also particularly in Tyneside, most of the highway schemes planned for construction up to 1974 were committed, by the time the public transport plan was conceived.[3,4]

(ii) Significant public-transport recommendations were <u>not</u> contained in any of the early studies nor in any "non-metropolitan" town studies.

(iii) The amenity societies, who normally co-ordinate pressure group activities against road construction, supported public transport measures.[5]

(iv) A large proportion of the public transport infrastructure that was recommended, comprised tunnels and bridges or improvements to existing railways. Because of this and the last reason, we are justified in disregarding public transport costs in considering the variable "SOCIAL COST RESISTANCE (SCR)".

(v) In all the four towns where public transport works were recommended, the City Engineer was not responsible for the schemes. They were the responsibility of the Director of Public Transport, who reported to the respective public transport executive and the public transport authority.[6] Therefore it is unrealistic to include public transport costs in the dependent variable FMR, when the variable "CHIEF ENGINEER CONTINUITY (CECON)" is included in the set of independent variables.

(vi) There is some justification for including public transport in FMR when correlating with the variable "POLITICAL CONTINUITY (POLTIC)".
However, in a multiple regression exercise, it is not possible to include public transport costs in FMR when considering one independent variable (POLTIC) while excluding them, when considering the other two (CECON and SCR).

14.3 NON-LINEAR RELATIONSHIP BETWEEN VARIABLES

A logarithmic transformation of all the variables was undertaken for this multiple regression analysis. The reasons for preferring this transformation over a linear relationship are:

(i) A logarithmic regression was first introduced in this thesis, in chapter 11, to explain the relationship between "POLTIC" and "FMR". There it was justified on the basis that such an expression allowed for an element of "loss in enthusiasm over time in implementing the plans" to be brought into the expression. This loss in enthusiasm can occur for instance, when councillors who are committed to the original plan are replaced on their retirement by new councillors within the same ruling party. It was found desirable to keep this type of function for the multiple regression analysis.

(ii) The relationship between "SCR" and "FMR" is also slightly improved by transforming both variables to be logarithmic functions. This improvement can also be expected intutively for when "SCR" increases to socially unacceptable levels, "FMR" will tend to zero. A linear relationship would produce negative values of FMR for high values of "SCR".

(iii) It is cumbersome in a multiple regression analysis to combine some linear variables (together with their "additive constants") with other logarithmic functions. In any case it will be very difficult to intuitively appreciate the results produced.

(iv) Most importantly, the case studies referred to earlier and my experience suggest that the independent variables act jointly to influence the decision-making process and do not each separately add their contribution to the implementation of plans.[7,8] The former type of joint interaction can be best represented by a "multiplicative" function produced by a logarithmic transformation rather than by an additive function.

14.4 EXAMINATION OF HYPOTHESIS I

The SPSS MULTIPLE REGRESSION ANALYSIS: SUBPROGRAM REGRESSION was used for this analysis.[9] Copies of the data input to the program and the output are given in figures 14.01 and 14.02 respectively.

14.4.1: The regression programme and its input

The SPSS programme suite allows regression to be performed in a variety of ways. The way used here was stepwise-regression, in which the independent variables are introduced sequentially starting with that having the strongest correlation with the dependent variable. Two of the independent variables are continuous and for the reasons already given were entered in logarithmic form. The remaining variable CEPAR is a binary one (1 denotes continuity of chief-officer, 0 denotes discontinuity. For CEPAR therefore taking logarithims is meaningless and it was simply entered as a dummy (i.e. two valued) variable.

The programme calculates the regression coefficients that define a best-fit curve;

log FMR = A* log (POLTIC) + B* log (SCR) + C* (CEPAR) + D

As with other regression programmes the fraction of the dependent variables variance explained by the regression equation is given - (R SQUARE in Fig. 14.02). This normally rises as the independent variables are introduced in turn. The standard deviation of the predictions (BETA in) are also indicated.

```
:PLSC.KINBAGR.DATALIB(1,S,1).FMRLGN82MULT(4) MAX_REC_LENGTH =    256 BYTES
```

FIG. 14.01

```
      1  RUN NAME        MULTIPLE REGRESSION WITH POLNTC SCRLGN CEPAR
      2  FILE NAME       MULTRUN1,MULTIPLE REGRESSION WITH POLNTC SCRLGN AND CEPAR
      3  VARIABLE LIST   NUMBER,SEG56,SEG12,FMR,CR,POLTIC,CEPAR
      4  INPUT MEDIUM    CARD
      5  INPUT FORMAT    FIXED(F2.0,5F9.4,F4.0)
      6  N OF CASES      23
      7  COMPUTE         SR=1/(SEG56-SEG12)
      8  COMPUTE         POLNTC=LN(POLTIC)
      9  COMPUTE         FMRLGN=LN(FMR)
     10  COMPUTE         SCR=SR*CR
     11  COMPUTE         SCRLGN=LN(SCR)
     12  REGRESSION      VARIABLES=FMRLGN,POLNTC,SCRLGN,CEPAR
     13                  REGRESSION=FMRLGN WITH POLNTC(99),SCRLGN(99),CEPAR(99)
     14  READ INPUT DATA
     15   1     .335     .091     .48     4.53     .67   1     OLDHAM
     16   2     .296     .105     .30     6.43     .50   1     MANCHESTER
     17   3     .307     .121     .69     3.35     .42   1     BOLTON
     18   4     .336     .080     .22     6.31     .58   1     SALFORD
     19   5     .317     .134     .51     6.41     .58   1     ROCHDALE
     20   6     .254     .140     .38     3.46    1.00   0     BURY
     21   7     .357     .095     .69     9.88     .80   1     LIVERPOOL
     22   8     .422     .065     .30     3.48     .60   0     BOOTLE
     23   9     .326     .125     .66     1.53    1.00   1     BIRKENHEAD
     24  10     .258     .163     .51     4.45    1.00   1     WALLASEY
     25  11     .373     .059     .63     1.99    1.00   1     ST.HELENS
     26  12     .277     .135     .35     2.47     .83   1     S'HAMPTON
     27  13     .211     .169     .01     9.09     .01   0     BATH
     28  14     .267     .118     .08    14.08     .22   0     LEICESTER
     29  15     .281     .116     .32    10.19     .83   1     COVENTRY
     30  16     .257     .113     .50     6.39    1.00   1     PORTSMOUTH
     31  17     .277     .196     .01     7.79     .01   0     OXFORD
     32  18     .299     .163     .37     3.16     .75   1     TYNEMOUTH
     33  19     .295     .100     .19     4.68     .17   1     SUNDERLAND
     34  20     .309     .092     .24    13.77    1.00   0     GATESHEAD
     35  21     .274     .125     .22    13.87    1.00   0     NEWCASTLE
     36  22     .326     .104     .05     9.33     .33   0     NOTTINGHAM
     37  23     .335     .104     .22     6.47     .29   0     MIDDLESBRO
     38  FINISH
```

MAXIMUM STEP [illegible]

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AT ALL TIMES.

- - - -

14.4.2 Discussion of output

The regression output is divided into two parts: step by step results printed out when a variable is introduced to the regression equation (page 1 of figure 14.02) and the summary table (page 2 of Fig 14.02). Using the regression coefficients output in the summary table, the multiple regression is given by,

$$LOG_e (FMR) = 0.641\ LOG_e(POLTIC) + 0.622(CEPAR) - 0.235\ LOG_e(SCR) - 0.46($$

WHERE CEPAR = 0 or 1 EQN 1

which can alternatively be stated as;

$$FMR = \frac{(POLTIC)^{0.641}}{(SCR)^{0.235}} \times (0.63 + 0.54\ CEPAR) \quad \text{EQN 2}$$

WHERE CEPAR = 0 OR 1

As an illustration, in the case of Manchester, the data (see figure 14.01) given is;

SEG 56 = 0.296, SEG 12 = 0.105, FMR = 0.30, CR = 6.43

POLTIC = 0.50 and CECON = 1

Therefore Using EQN 1;

$$LOG_e\ FMR = 0.641\ LOG_e\ (0.50) + 0.622(1) - 0.235\ LOG_e \left(\frac{6.43}{0.296-0.105} \right) - 0.468 = -1.116$$

Therefore, FMR = 0.238

which compares with a measured value of FMR = 0.30

Nearly 91 percent (R-SQUARE = 0.90993) of the variation in FMRLGN is explained by the regression equation. A second measure of the dependency of a variable on an independent variable is the slope of the equation describing this relationship, a horizontal line (slope = 0) meaning that the two variables are not related while a negative slope meaning that an increase of one variable. will result in a decrease of the second variable. The slope of a multiple regression equation is measured in terms of the normalised regression coefficient BETA. In our case, the variable POLNTC has the highest BETA value ($BETA_{POLNTC}$ = 0.699) followed by CEPAR ($BETA_{CEPAR}$ = 0.262) and finally SCRLGN ($BETA_{SCRLGN}$ = -0.168) all of which suggest satisfactory relationships with the dependent variable. However, I will statistically examine to see if it is wort'.while retaining the third variable SCRLGN (the least significant) in the regression equation. The terms F and TOLERANCE printed in the step-by-step output would be used for this purpose.

Firstly, the value of F for SCRLGN is 3.74 (see Fig 14.02(1)) The F-statistic is another measure of the normalised regression coefficient BETA. This value of F with 1 and 19 degrees of freedom is significant at less than 8 percent i.e. one can be 92 percent confident about the result. (For the same degrees of freedom, to be significant at 5 percent the value of F should be 4.38 and to be significant at 1 percent F should be 8.18).

Secondly, the variable has a tolerance of 0.6315 (see Fig 14.02) If a tolerance is small then the variable is nearly a linear combination of variables already in the equation. Tolerance has a range of 0 to 1. The output value suggests that SCRLGN contributes a new dimension in explaining the variation in FMRLGN.

Thirdly, it is intutivoly attractive to retain this variable because pressure group activities are being recognised as having a growing influence in transportation policy making (See Chapters 8 and 15).

The 3-variable equation given above has a standard-error of 0.383334 (see Fig. 14.02(1)).
This is the standard-deviation of the residual and can be looked upon as the typical error in prediction. Thus on the average, the predicted FMRLGN will deviate from the measured FMRLGN by 0.3834 units of the latter. A scatter graph of PRED. FMR Vs MEASURED FMR (see Fig. 14.03 graph) and a tabl (see Fig. 14.04) comparing FMR with (PRED. FMR $\pm$ 1.0 STANDARD ERROR) are given to illustrate these deviations.

14.4.3 Comments on the residual (or "unexplained") variation in FMR

Comparison of the calculated FMR against the predicted values of FMR (see Figs. 14.03 & 14.04) showed that in 6 towns - Liverpool, Bolton, Middlesborough, Salford, Southampton and Nottingham, the measured values of FMR were outside the range of (PREDICTED FMR I 1 STANDARD ERROR). Four special reasons are applicable for these unexplained variations.

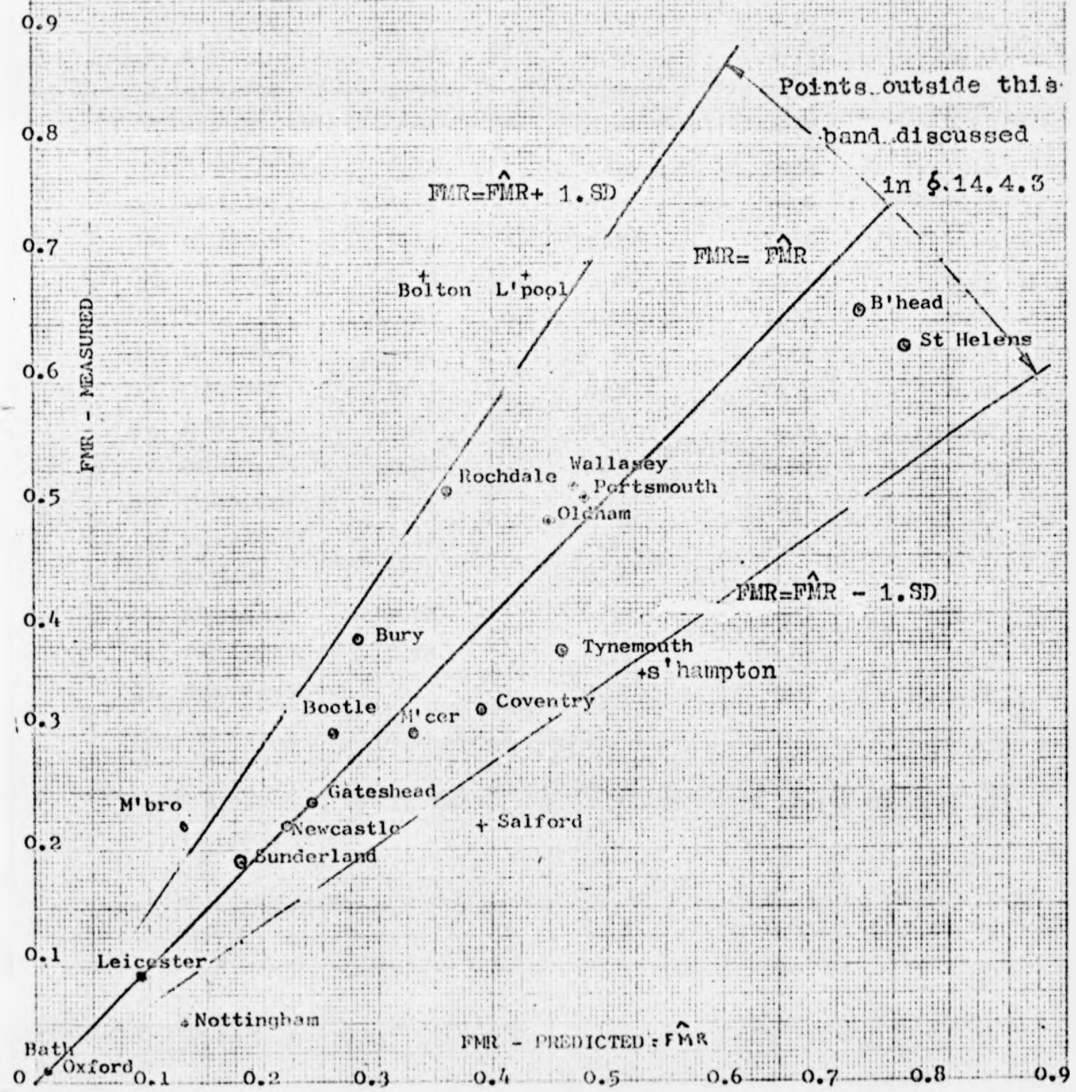
FIG 14.03

COMPARISON OF PREDICTED FMR VERSUS MEASURED FMR

LOG_e (FMR) = 0.641 LOG_e (POLTIC) + 0.622 (CECON) - 0.235 LOG_e (SCR) - 0.468

WHERE CECON = 0 or 1

COEFFICIENT OF VARIATION r^2 = 0.91



Marquell Press. 4591. 6/80. Nylo.

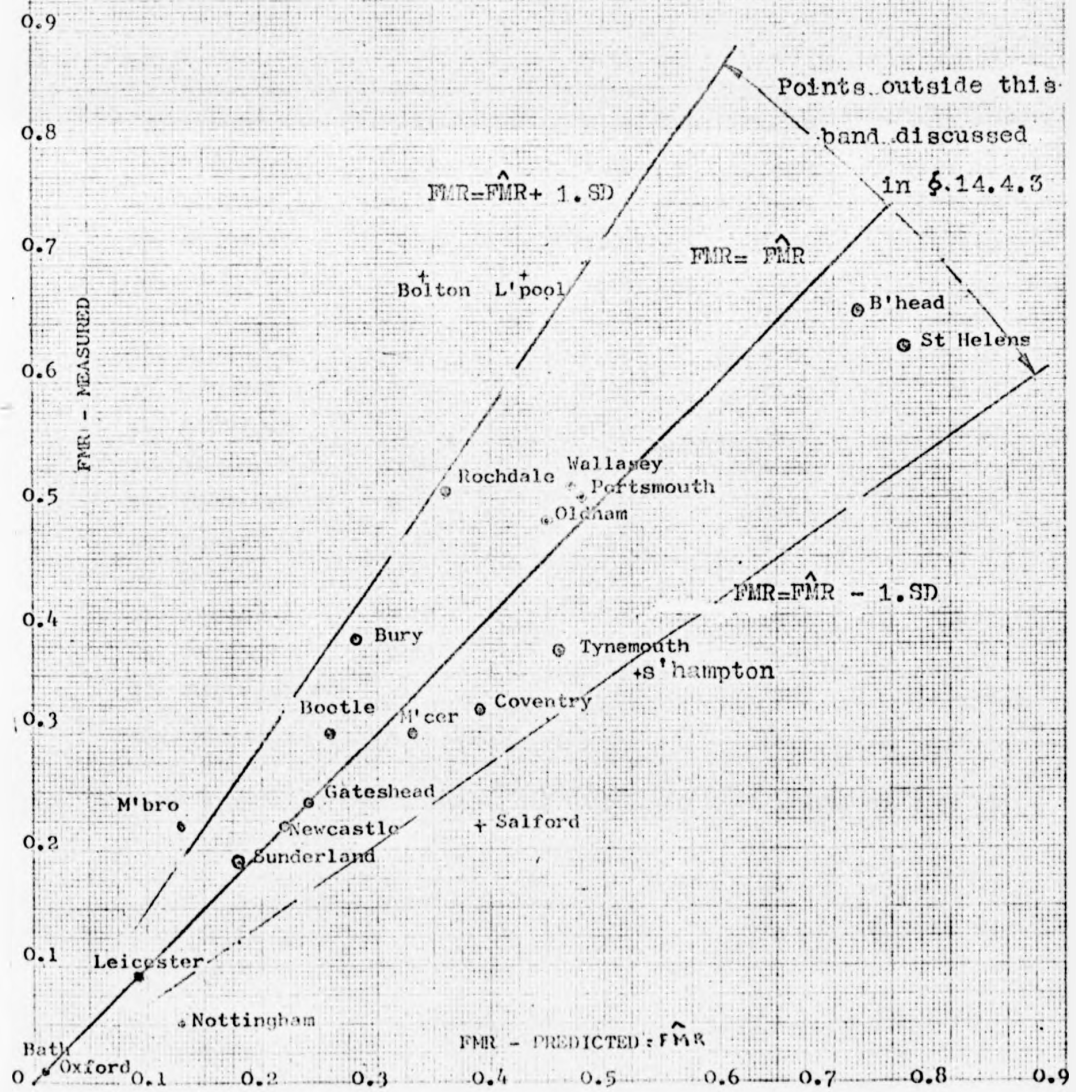
FIG 14.03

COMPARISON OF PREDICTED FMR VERSUS MEASURED FMR

LOG_e (FMR) = 0.641 LOG_e (POLTIC) + 0.622 (CECON) - 0.235 LOG_e (SCR) - 0.468

WHERE CECON = 0 or 1

COEFFICIENT OF VARIATION r^2 = 0.91



Marquell Press, 4501, 6/80, Nylo.

COMPARISON OF MEASURES "FMR" VS "PREDICTED FMR"

STANDARD ERROR (SE) FOR THE REGRESSION EQUATION = 0.383 (See TABLE 14.02 PAGE 2, STEP 3)

THEREFORE, THE RANGE WITH 1 STANDARD ERROR OF PREDICTION = (PRED. FMRLGN) ± 0.383

E.G. FOR MANCHESTER, THE RANGE OF FMRLGN WITH 1 STANDARD ERROR = -1.116 ± 0.383

THEREFORE, THE RANGE OF PRED FMR WITH 1 STANDARD ERROR = $ANTILOG_e$ (-1.116 ± 0.383) = 0.22 to 0.48

TOWN	PREDICTED FMR	PRED FMR + 1SE	PRED FMR -1SE	MEASURED FMR
1. OLDHAM	0.45	0.67	0.31	0.48
2. MANCHESTER	0.33	0.48	0.22	0.30
3. BOLTON	0.34	0.50	0.23	0.69
4. SALFORD	0.39	0.57	0.26	0.22
5. ROCHDALE	0.36	0.52	0.24	0.51
6. BURY	0.28	0.41	0.19	0.38
7. LIVERPOOL	0.43	0.63	0.29	0.69
8. BOOTLE	0.26	0.39	0.18	0.30
9. BIRKENHEAD	0.72	1.00*	0.49	0.66
10. WALLASEY	0.47	0.69	0.32	0.51
11. ST HELENS	0.76	1.00*	0.52	0.63
12. SOUTHAMPTON	0.53	0.78	0.36	0.35
13. BATH	0.01	0.01	0.01	0.01
14. LEICESTER	0.08	0.12	0.05	0.08
15. COVENTRY	0.39	0.58	0.27	0.32
16. PORTSMOUTH	0.48	0.70	0.33	0.50
17. OXFORD	0.01	0.02	0.01	0.01
18. TYNEMOUTH	0.46	0.68	0.32	0.37
19. SUNDERLAND	0.18	0.26	0.12	0.19
20. GATESHEAD	0.24	0.35	0.16	0.24
21. NEWCASTLE	0.22	0.32	0.15	0.22
22. NOTTINGHAM	0.13	0.18	0.09	0.05
23. MIDDLESBOROUGH	0.13	0.19	0.09	0.22

* FOR BIRKENHEAD AND ST HELENS, THE CALCULATED UPPER LIMITS ARE 1.06 AND 1.11 RESPECTIVELY

Firstly in Liverpool, Bolton and Middlesborough the MEASURED FMR is larger than the PREDICTED FMR. (Even in these cases the MEASURED FMR is within PREDICTED FMR + 2 STANDARD ERRORS). The result is partly anticipated. In chapter 12, we noted that towns that produced road schemes which had relatively low impact on the community considerably improved their chances to implement the schemes. In Liverpool, lower community impact was experienced in the provision of the 2nd Mersey Tunnel.[10] In Bolton and Middlesborough, much of the expenditure was associated with the provision of link roads from the rural M63 and A19 respectively.[11] Being roads linking a town to the rural trunk road network, there was greater opportunity to locate these roads partly along lines of existing cracks and partly on "green field" sites. For instance, A 666, the Bolton Link Road is built along a "natural" crack created by the River Croal and the Manchester Bolton Railway line.

Secondly in Salford, the "MEASURED FMR" was lower than the "PREDICTED FMR". Further investigation showed that nearly half the recommended capital expenditure for Salford was directed in solving, essentially Manchester's traffic problems, for instance the provision of Manchester Inner Ring Road which was not built. This proposed ring road was located such that almost one-third of it lay just within Salford's boundary. (See Fig. 5.07)

Thirdly, the MEASURED FMR for Southampton is 0.35 while the PREDICTED FMR is 0.49. It appears that this difference was associated with the "peaks and troughs" in output which will be prominent over a period if an expensive scheme has to be implemented in one phase. In this particular case the "trough" in construction activity was related to the pre-construction activities needed to provide the new Itchen Road Bridge. The construction of this £6 million (1970/71 prices) toll bridge began in 1974/75 and lasted for a period of 4 years. This bridge although mentioned in the "Southampton Outline Transportation Plan" was essentially conceived as a separate project and was designed during 1971/74 by a team drawn from Southampton City Council staff and Messrs. R. Travers Morgan and Partners. The chairman of the Working Party was the Southampton City Engineer.[1] Itchen Road Bridge proposals were not included by me in calculating FMR.

CONCLUSIONS

Local political continuity, chief engineer continuity and the propensity to form pressure groups, taken together are highly significant in explaining the variation of urban transportation plan implementation. Political continuity is the most significant single variable in this respect followed by chief engineer continuity. If necessary, the predictive accuracy of the equation could be further enhanced by improving the variable SCR - propensity to form pressure groups.

14.6 NOTES

1. Grant, J (1977) THE POLITICS OF URBAN TRANSPORT PLANNING
London W1, Earth Resources Research Ltd., 40 James Street;
p. 135

2. Williams, R.G. (August 1980) GOVERNMENT TRANSPORT EXPENDITURE CONTROLS AND LOCAL GOVERNMENT AUTONOMY
Unpubl. dissertation submitted to the University of Oxford. Department of External Studies, p. 23

3. The Tyneside Rapid Transit Bill was enacted in Parliament only by 1972
Surveyor

4. New Civil Engineer (7 August 1980) TYNESIDE METRO FINALLY COMES TO SURFACE
London, Institution of Civil Engineers, Great George Street;
pp. 14-17

5. For instance Transport 2000 is a widely recognised public transport pressure group. Its members include the Civic Trust, Conservation Society and Friends of the Earth

6. Public passenger transport in Liverpool and Birkenhead is provided by the Merseyside Area Passenger Transport Authority and that in Newcastle and Gateshead is provided by the Tyne and Wear Passenger Transport Authority. Before the local government re-organisation in 1974, these authorities were independent of the local councils.

7. Grant, J; op. cit. p. 135

8. Walker, G & Savage, C.J. (1958) as quoted in Foster, C.D. (1963) THE TRANSPORT PROBLEM
London, W1, Blakie & Son Ltd., 5 Fitzhardinge Street, p.1

9. Nie, N, Bent, D.H. & Hull C.H. ( )
STATISTICAL PACKAGE FOR THE SOCIAL SCIENCES (SPSS)
New York, Mc Graw-Hill Book Company; pp.

10. I was an employee of Liverpool Corporation and was closely associated with the construction of the second Mersey Tunnel.

11. I completed case-studies on these six towns. These included site visits, searches in the local libraries and information supplied by Council staff.

P A R T F O U R

CONCLUSIONS TO IMPLEMENTATION ANALYSIS

CHAPTER (xv) APPLICABILITY OF THE STUDY IN THE POST-REORGANISATION PERIOD

(xvi) CONCLUSIONS OF THE STUDY

CHAPTER FIFTEEN

APPLICABILITY OF THE STUDY IN THE POST-REORGANISATION PERIOD

. . . . . .

"LIVERPOOL RING ROAD DIES AS LABOUR MARCHES IN:
There is absolutely no justification for the road -
says the new Council"
announced the New Civil Engineer (NCE, 14th May 1981)[1]
The NCE report continued that,
"Within days of seizing control of Merseyside County Council, in a swing away from the Tory party, Labour's new ruling leadership has confirmed plans to scrap Liverpool's £50 M ring road. Council leader Jim Stewart-Cole ... (said) that he was determined to prevent the controversial scheme's northern leg from being built - even though a £5 M initial contract started there just two weeks ago."

Stewart-Cole said that the only thing to prevent his Council - which has an overall majority - from halting the northern leg would be if this was contravening the law and thus made Council Members financially liable for such action.

But you can be assured that the massive eastern leg link between the northern and southern legs of the ring road will not be built he said ... Stewart-Cole claimed, the Tories during their last weeks in power had rushed through the £5 M northern leg contract by 'suspending standing Orders and pushing out invitations to tender. .... They are legally within their rights, but morally wrong to do this because they knew they would be defeated in the elections.'

The above decision is typical of the reversals in transport planning policies that nowadays occur regularly because of the increasing polarisation of local politics since local government reorganisation.

In the previous chapters, I identified political continuity, chief officer continuity and the pressure group activities as the important influences that determined success in implementing long term plans prior to 1974. In this chapter, the strength of these three social factors in local government decision making in the post-reorganisation period will be examined. In addition, the effect of

other minor factors, that were previously identified (for instance national economy) that might have increased their influence on the urban transport planning process, during the past decade will also be examined.

15.1 CHANGES IN LOCAL POLITICAL CONTINUITY

In Chapters 11 and 14 it was shown that the continued control of the county borough council, by the local political party under whose authority a plan was prepared, is the most important criterion for its successful implementation. Local Government Reorganisation significantly affected the ability of transport planning authorities to maintain political continuity. The following changes stemming from the Local Government Act of 1972 are relevant in this respect.

Firstly, the post of alderman has been abolished thus making the position of authorities with marginal council majorities less tenable.[2] The abolition of aldermen would also help to reduce the number of members committed to the successful implementation of long term plans.

Secondly, councillors are now paid an attendance allowance. This measure has increased the number of contestants for a seat, thus disrupting the continuity in Council by only those who can serve without financial recompense.[3]

Thirdly, the transportation planning process, particularly in the former county boroughs is now complicated by the power-sharing that has resulted from the reorganisation. For instance most of the district councils in urban areas were former county borough authorities who lost their substantial transport planning powers. They are normally the local agents on transportation matters within their administrative areas, for the counties. Also, the district enjoy certain residual powers for transport planning, such as the provision of car-parking, now recognised to be the most important tool to influence urban private vehicle useage. Such power-sharing would result in less permanency than in the pre-reorganisation period, to implement transportation policies, as the balance of political control among the central government, the county councils and district councils changes. Roy Rhodes commented on the inter-authority conflict between the county and the districts as follows:[4]

> "The two-tier structure especially in metropolitan areas has been a flash-point. The metropolitan counties have sought to define a clear role for themselves and in doing so have met resistance, if not downright antagonism from their districts."

Fourthly, formal arrangements have been made to extend organised politics within the local government machinery. In most counties the party leadership has been incorporated in the committee structure of local government in policy and resource committees.[5]

Finally, and most importantly, the practice of rural weighting in drawing up electoral boundaries has been discontinued and boundaries have been re-drawn to amalgamate the urban areas, thus bringing the latter to influence the government of the counties. The most obvious result of the merger of urban and rural areas is the spread of party politics. Before reorganisation, party politics was predominent in the urban areas. In the counties, before reorganisation party politics existed in a minority, albeit a substantial one. Soon after reorganisation, only Cornwall and Isle of Wight of the English counties, remained controlled by independents. Also before reorganisation, only Durham of the English counties was controlled by the labour party. Immediately after reorganisation, this number has grown to seven and since then, this balance of power has increased in favour of the Labour Party.[6]

Therefore it is reasonable to conclude that local government reorganisation has introduced a system of control in which party politics has not only become more dominant but its impact on the management of the local authority has been intensified. Moreover, the power-sharing between the three elected bodies instead of the county boroughs and the central government in the pre-reorganisation period, has made the transport planning decision making process, less conducive to long-term planning.

15.2 CHANGES IN CHIEF OFFICER PARTICIPATION

In the 60s, the chief engineer had the greatest influence amongst the chief officers on deciding the contents of transport plans. Since then three significant changes have occurred.

(i) the introduction of a new grant system to provide

comprehensive local transport and the attempts to co-ordinate land use transport strategy under the new style development plans system;

(ii) the introduction of "corporate approach" to the management of local government;

(iii) the growing influence of politics in decision making.

The effect of these changes on the influence of the chief engineer will now be discussed.

15.2.1 The Introduction of the New Grant System

In Chapter 10, the effects of the Transport Act 1968 and the Town and Country Planning Act 1968, on the influence of the chief engineer were analysed. There, it was concluded that the enactment of these two Acts did not substantially alter his role.

Since reorganisation, the new County Councils are made responsible for public transport, highways and strategic planning - the three key elements of landuse - transport policy. This co-ordination is reinforced by changes in the system of grant allocations. Under the new system, a single annual grant is allocated to cover all forms of transport expenditure. The grant is partly distributed via the Rate Support Grant (RSG) and partly as the new Transport Supplementary Grant. To justify their transport expenditures, the County Councils have to submit annually, a Transport Policy and Programme (TPP) to the Department of the Environment.

Circular 27/74 indicates how TPPs should relate to the structure and local plans.[7] The new development plans are supposed to provide the framework for TPPs, because the former are more comprehensive subject to public participation and have to go through a cycle of statutory processes. In reality, this desired end has not been achieved because of the following reasons:

Firstly, the time scales of the TPPs are vastly different from that of the development plans. The first round of Structure Plans has only recently been approved by the Secretary of State and a large number of local plans still await publication. However, eight rounds of TPPs are already completed, largely without the assistance of development plans. (The present intentions of the Government is to reduce the role of the TPP and the TSG system and eventually to

distribute a single, comprehensive grant.)[8]

It is now recognised that even when the first round of development plans are complete, because of their long turning cycle, it is unlikely that rapidly changing issues and policies in transport could be incorporated in the development plan system before being applied in the TPP. Rather, the TPPs provide the opportunity for an annual stock taking and expression of changing transport policies, which might be eventually incorporated into the structure plans if the policies stand the test of time. David Bayliss reporting on this relationship stated that,

> "by singling out local transport for separate treatment, the tail has come to wag the dog and the proper relationship between landuse and transport has been usurped."[9]

Secondly, the exclusion of trunk roads from local control is not conducive to co-ordinated landuse-transport strategy. This is particularly important after the reorganisation, because the termination of trunk roads at county borough boundaries has since been scrapped.[10] This situation has brought the control of some major through fares in urban areas under the direct control of the Department of Transport with, in practice, the County Surveyor acting as the Department's main agent.

Thirdly, the TPPs are fairly tightly controlled, as to the detailed allocation of funds, between the various programmes by the central government. Williams reporting on TSG allocations in Oxfordshire reported that,

> "... not only has the Government attempted to control the expenditure but progressively it has tried to influence the way in which resources are to be allocated.[11] This has been achieved by direct intervention, for instance the national moratorium on starts on new capital projects between July 1976 and May 1977, by exhortation in the annual TSG Circular and the TSG decision letters to each authority ... Bus revenue support has received particular attention from the Government. In 1975, along with other Shire counties, Oxfordshire was encouraged to revise the bid upwards, as part of the attempt to encourage counties to provide a higher level of support for buses ... As part of the same process, a special revenue support threshold was introduced for shire counties in 1977, which was intended to "ensure that all counties will receive at least enough Transport Supplementary

Grant" to cover 70% of their forecast expenditure on revenue support."

Central control in this manner, does not encourage the philosophy of producing TPPs as working documents, derived from policies contained in the development plans. The control leads to a position where TPPs are produced as a physically bound volume of separate working documents for highway construction, maintenance, traffic management and parking and public transport, each largely under the control of the local authorities spending section, much as it was in the pre-reorganisation period.

Comments by the Greater Manchester Transport Action Group on the Structure Plan generally support the last three points. The Group stated, in 1980, that:

"The major highways schemes are in effect the residue from the SELNEC Highway Plan of 1962[12] .... As things stand, the GMC (Geater Manchester Council) Major Highways Programme, the Government's Trunk Road Programme and the Medium Term Railway Strategy have been advancing on their separate fronts with limited consideration of their interaction or of their effects on planning objectives.

..... Unlike the highway programme there is no firm programme for bus transport."

Therefore it is reasonable to conclude that the integrated approach to landuse-transport planning has not significantly altered chief engineers' influence over highway-policy.

15.2.2 The Introduction of "Corporate Approach"

The Report entitled, "The New Local Authorities Management and Structure" (Bains Report) was published in 1972 and implemented with the Local Government Reorganisation on 1st April 1974.[13] The Bains Report recommended the appointment of a chief executive, who would be the head of the councils' paid officials. The chief executive will be responsible for securing overall co-ordination and control of all services provided by the council. If successful, such an approach could have reduced the parochial influence of the departmental heads in allocating landuse-transport resources.

However, for essentially the same reasons as those given for the

"integrated approach", the "corporate approach" also failed to undermine the traditional role of the chief officer in deciding the input to transport plans.

For instance, Greenwell, Northamptonshire's Chief Executive noted that,

> "the local authorities have adopted these (corporate management) structures and then been disappointed to find that the new organisation tends to work very much as the former authorities.[14]
>
> Departmental loyalties remain strong, committee chairmen and "their" chief officers form strong alliances to "protect" their services, chief officers' meetings are used to air the grievances of individual chief officers, very rarely are collective decisions reached in the interests of the authority as a whole; committee chairmen show no signs of wishing to act corporately. Such complaints are commonplace .... "

This view is further supported by Greenwood et al who sought to explore the process of organisation-functioning in British local government.[15] Thus corporate management has not altered chief engineers' powers over highway policy.

15.2.3 The Growing Influence of Politics in Undermining Chief Engineer Participation:

Soon after the local government reorganisation the County Councils completed a review of inherited road proposals. Their reviews were substantially based on political consideration, with a low level of technical support provided, largely using the pre-reorganisation transport surveys. For instance, Nickson and Batey described how the surveys and analysis from the SELNEC model, with minor modifications, were used to provide technical support for highway schemes in Greater Manchester, from the inherited roads list.[16] Furthermore, 'my' anaylsis of TPP from 8 other counties, supported by confirmation from the respective transport planners, showed that the reviews of their inherited road schemes were substantially completed by early 1976, a period of only 2 years since the reorganisation. These reviews also largely employed existing traffic data to support highway schemes which had the backing of local politicians.

Statements made by politicians also support the view that the influence of chief officers has been undermined by party political considerations. For instance, John Grugeon, leader of the Kent County Council observed in 1976 that,

> "It is important to remember the relative positions of the chief officers and chairmen(of committees) against this background.[17] Unless a chairman has his political colleagues' views in mind, he will sooner or later be replaced by someone, who more nearly expresses the common view of the majority party. Failure to understand this point is often at the root of impatience and difference between chief officers and committee chairmen."

The importance given to public transport revenue support measures (see section 15.4) as opposed to capital spending, in the post-reorganisation period, has also helped to replace bureaucratic decision making by party political considerations. This is because highway capital justification employ much sophisticated modelling procedures while equivalent measures are not commonly available to deal with revenue-support problems.

The Market Analysis Project (MAP) is the most sophisticated mathematical tool that was created in the post-reorganisation period to model bus scheduling and operations.[18] Its success could have assured the future of bureaucratic decision making in the bus industry. However, the MAP proved to be deficient in similar respects as its counter part of the 60s, the landuse-transport model.

The Association of Transport Co-Ordinating Officers commented as follows on the future of the Market Analysis Project.[19]

> "MAP has not in itself necessarily resulted in the achievement or control of financial targets ... even if a scheme is right unless its design is settled, it may not be when it is subsequently introduced and within months of implementation, a very different picture can emerge from that forecast..... Changes in policy can now be expected which would materially affect the future application of MAP. The implementation of the Transport Act 1980 and the current Government policy of encouraging competition, releasing fares control and reducing cross-subsidisation must influence the type of network that should be evolved. The cut-back in revenue support in many counties, the abolition of bus grant and the tighter controls

on cash limits and borrowing on top of a deteriorating trading position all place pressure for rapid short term changes."

Based on all the evidence given in Section 15.2, I arrive at the following two conclusions:

(i) the relative influence of the chief officers within their group has not markedly changed since the reorganisation;

(ii) political decision making has (somewhat) undermined the influence of chief officers, in the post-reorganisation period.

15.3 CHANGES IN THE INFLUENCE OF PRESSURE GROUPS

The effectiveness of pressure groups in challenging transport proposals have substantially increased in the post reorganisation period. This increase can be attributed partly to the influence of national environmental lobbies in being able to martial the objections at local level and partly to legislative changes.

15.3.1 Improvements in Pressure Groups' Organisation

A large number of national environmental lobbies have built network of branches to promote their objectives at local level since 1974. An information note released by British Road Federation in 1980 stated that,

"With objections to road proposals becoming more vocal and with objectors taking advantage of every opportunity to prolong and in some cases disrupt proceedings, the time taken for inquiries has tended to rise.[20] ... Some of the causes of stretching of inquiries can be ascribed to the various local amenity and less obviously interested groups making their views known, and in some cases putting forward alternate routes. As well as adding to the duration of the inquiry itself, the inquiry consultation period has got longer. For example, the first motorway scheme, the M6 Preston bypass took five and a half years to plan and build, the M180 Scunthorpe bypass took eight and a half years from 1971 to completion and the A12-A13 sections of the M25 will take 13 years from inception in 1969 before it opens in 1982 ... It is the actions of some of the national (pressure) groups that cause unwarranted delay."

The above note identified Transport 2000, Conservation Society and Friends of the Earth as the important national antiroad lobbies, with rigorous local networks. For instance, Transport 2000 founded in 1973, has a network of 2 dozen branches, concentrating on resisting highway construction from the development planning stage to the scheme inquiries. However, it must also be noted, that in the post-reorganisation period, British Road Federation itself has set up a number of branches in opposition to the environmental lobbies; for example the Northern Road Users Group covering the Tyne Wear and Teesside regions.

Mayer Hillman commented on the overall effectiveness of these opposing groups as follows:

> "The extent to which any or all of these groups and organisations have influenced either policy making in general or specific policies in particular is difficult to assess. It is obvious, however, that none of them has fully achieved their objectives and it may be that their influences have balanced each other."[21]

An indirect advantage to the anti road lobby in extending the preparation period, irrespective of the result is, that, eventually political changes at local and national level could altogether delete the resisted scheme from the programme. For instance, it is widely claimed that the environmental movement gained its impetus from the resistance to the first stage of the West Cross Route in London. The resistance extended to the implementation of the rest of this scheme estimated to cost £180 million resulting in the scheme being delayed through the Conservative control of the Greater London Council (GLC) and finally deleted from the Highway Programme in 1981, when the Labour Party regained control of GLC.

On this basis, it is reasonable to conclude that in the post-reorganisation period, anti road lobbies have successfully increased their influence to resist the implementation of highway schemes.

Several legislative changes in the post-reorganisation period have helped the anti road lobbies, in their cause.

15.3.2 Pressure Groups and New Legislation

Legislative and administrative changes that affected the influence of local pressure groups in the two years following reorganisation are as follows:[22]

(i) the TPP/TSG system and the new Development Plans;
(ii) Land Compensation Act 1973;
(iii) "Participation in Road Planning" published by the Department of the Environment (DoE) in 1973;
(iv) "The Highways (Inquiries Procedures) Rules 1976

Details of the TRANSPORT ACT 1968, the TOWN AND COUNTRY PLANNING ACTS 1968 AND 1971 and the introduction of the TPP/TSG SYSTEM are given elsewhere in this thesis (particularly see Chapters 2, 10 and 17). Opportunity for public participation in the TPP/TSG system was introduced by relating it to the new development plans. I provided three pieces of evidence in section 15.2.1 to show that the intended co-ordination however was not achieved. This was because firstly that the time scales for the TPPs were not co-ordinated with those of the development plans, secondly that the trunk roads are planned by the central government and the public consultations for these roads are progressed independent of the development plan system and thirdly the TPPs are fairly tightly controlled by the central government as to the detailed allocations of funds. In addition the following further point which would hinder proper public consultation of transport plans through the development planning system is worth noting.

The Structure Plans are strategic documents and are not expected to contain details of revenue support measures. For instance, the Secretary of State for Environment commenting on the Structure Plan for Oxfordshire, in relation to Oxford transport stated that,

> "Measures for the management of traffic and for the development of public transport seem a more appropriate solution to the problem with such minor improvement as might be necessary to the road network. The most appropriate context for this to be dealt with is the Local Plan for Oxford."[23]

The above discussion suggests that the opportunity for public discussion of material contained in the TPP are provided in the local plan preparation stage. However, the arrangements for consulting the public on transport matters as part of the local planning consultation process are unsatisfactory for three reasons:

Firstly, as mentioned earlier in this chapter, a large number of local plans are not yet prepared but eight rounds of TPPs are completed. Secondly, the local plans are prepared by the district authorities. Therefore in practice, there is lack of co-ordination in presenting to the public, transport measures proposed by the counties as part of districts' local plan consultation. Thirdly, local plans cover only a part of a county, in some cases these plans are prepared to cover a small town. Plans dealing with small areas are not a satisfactory media to form an overall opinion about the county's transport policy, particularly public transport subsidies which accounts for a large proportion of local transport expenditures in the post-reorganisation period.

Based on the above evidence, it is reasonable to conclude that the TPP/TSG system and the new development plans did not significantly alter the influence of pressure groups on local transport policy making in the post-reorganisation period.

Before proceeding further with the changing significance of public participation, the following comment is worth noting. The rest of the legislation to be discussed in this section might appear to be related for trunk road construction. However, the Department of Transport expects and the local authorities follow similar provisions for principal and other roads. Also the public environment in which the road construction policies operate are fairly similar. Therefore it is reasonable to discuss these procedures as if there is no difference in promoting trunk and other road construction.

The Report of the Urban Motorways Committee to the Secretary of State for the Environment was published in 1973. Better "LAND COMPENSATION" provisions and opportunities for earlier public "PARTICIPATION IN ROAD PLANNING" are two of a number of improvements that have resulted from the Urban Motorways Committee recommendations.[25]

THE LAND COMPENSATION ACT 1973, apart from providing improvements in the terms of compensation, also set out to overcome some of the adverse environmental effects of urban highway construction, on their surroundings. In particular, it was possible under the Act for the promoting Authority to purchase land well in advance of the need, to provide for loss of amenities caused by noise and dirt, to acquire additional land for landscaping, planting and noise insulation and to

make "home loss" payments and removal expenses. However, some researchers subscribe to the view that the promoting authorities misused these powers in order to set in motion a "blight" along a chosen route by advance purchase and subsequent neglect of the properties. Also, it is sometimes claimed that the additional powers helped to avoid the optional "side roads order inquiry" by the authorities buying their way out of the mandatory "compulsory purchase order" inquiries.[25]

The effect of the enhanced "PARTICIPATION" procedure, was to provide an additional opportunity for public to comment on a number of options prior to the selection of the preferred corridor for the detailed design of a highway scheme. However it must be noted that regardless of this enhanced procedure, several criticisms were being made by the anti road lobbies, about the lack of opportunities for public to question transport policy decision making. Concern regarding the restrictive participation procedures was also noted by the Environment Sub-Committee of the Expenditure Committee. The Secretary of State recognizing public disquiet, announced a further inquiry in 1976, in an attempt to improve highway inquiry procedures.

HIGHWAYS (INQUIRIES PROCEDURE) RULES was enacted in June 1976. Levin commented on these Inquiries Procedures.[26]

> "The Rules introduced an entirely new concept, that of the statutory objectors ... and laid down that statutory objectors were the only ones who were "entitled to appear at the inquiry", any other objecting person or group could appear only at the discretion of the inspector ... Certainly it seems scarcely credible, since the Minister is obliged to consider the objections of "non statutory" objectors, that Parliament should have intended that he be free to exclude them from a public inquiry when one was convened ... Complaints ... that the rules are ultra vires Highways Acts have been made and the issue has yet to be tested in the courts."

Dissatisfaction with the inquiries procedures led the anti road lobbies to adopt militant tactics at local public inquiries. John Tyme was one of those who regularly used these tactics to gain publicity for his causes.[27] These lobbies also co-operated with local objectors in safeguarding the latter's interests.

Therefore it is reasonable to conclude that in the first half of the post-reorganisation period, opportunities for public participation was not substantially greater than the pre-reorganisation period, however the national anti road groups by direct representation through their branches and by indirectly assisting local objectors, significantly extended the scheme preparation period. Their actions led to delays and consequently to under-implementation of plans as the political control of promoting authorites changed hands.

It was in June 1977, a truce was called between the highway authorities and the anti road lobbies, with the publication of a White Paper entitled, "Transport Policy".[28] This White Paper contained a number of major policy changes, including promise to transfer some resources from road construction to public transport which helped to win the approval of the anti road lobbies. Further, recognising that concern has been expressed about the inadequacy of public and parliamentary discussions on transport policy, the Government undertook to publish not only annual White Papers on roads but also White Papers on transport policy as a whole, every three years or so. This White Paper on transport policy would review the significant changes that had taken place over the period, propose whatever adjustments to forecasts and policies seemed necessary and make available the essential facts and analysis. By this means, the Government aimed to,

> "provide a regular and better basis for reporting to Parliament and for debate there. They will also serve as an authoritative background for consideration of specific road schemes at public local inquiries."

The steps to improve local public participation, continued further with the publication of the REPORT OF THE ADVISORY COMMITTEE ON TRUNK ROAD ASSESSMENT in October 1977. This Report was a result of a review of the existing road appraisal and traffic forecasting methods. The committee while recognising the appraisal method to be,

> "generally sound as far as it goes, (believed) it to be unbalanced[29] .... It is unsatisfactory that the assessment should be dominated by those factors which are susceptible to valuation in money terms ... We believe that the right approach is through a comprehensive framework which embraces

all the factors and groups of people involved in scheme assessment. ... It is also central to the framework approach we have proposed that at the local level, the entire framework with supporting documents should be made publicly available."

With regards to the traffic forecasting methods, the Committee recommended that,

"Uncertainties are fundamental in the forecasting process, arising both from the data used and from the model itself.[30] It is crucial that such uncertainties are acknowledged ... The Department should indicate the likely range of uncertainties involved in the forecasts and demonstrate the consequences of selecting different values within the likely range."

Nearly all the recommendations of the Committee were accepted by the Government. The "framework" approach is now adopted for the presentation of road appraisal results, a range of traffic forecasts with assessment of uncertainties using statistical techniques is introduced as standard practice and "COBA", the cost-benefit analysis suite of computer programs, used for economic evaluation of road proposals, is now made fairly flexible and able to accept local deviations in traffic parameters. These changes should lead to further scrutiny of highway assessment and for a more informed basis for local public consultation. However the following two views to the contrary should also be noted before concluding this section.

Firstly, it is still possible, by negotiating satisfactorily with the land owners, to avoid all other forms of public consultations to highway proposals. Secondly, a large proportion of transport finance is now expended on the provision of public transport. However, neither the 1978 Transport Act, which was based on the White Paper on Transport Policy (1977) nor any other enactments legally bind a council to consult the public on public transport expenditures.

15.3.3 Concluding Remarks on the Influence of Pressure Groups in the post-1974 Period

(i) the local pressure groups are now better informed than in the 60s. They are further able to call upon the support of local branches of national pressure groups to support their local interests.

(ii) The reduced highway construction combined with an increased expenditure on public transport revenue support would result in a higher proportion of cause groups compared with self interest groups, particularly in local transport policy making.

(iii) Although the effectiveness of participation may have changed, no changes in the post-reorganisation period have occurred that would significantly invalidate the applicability of SEG distribution and cost of projects (as developed in Chapter 13) as measures to assess the success of local pressure groups in being able to influence local transport decision making.

15.4 CHANGES IN ECONOMIC CONDITIONS

It is widely claimed that the down-turn in national economy is a major cause for the poor implementation of plans in the post-reorganisation period. In this section, I will examine the validity of this claim.

In Chapter 8 I provided evidence to show that in the pre-reorganisation period, the central government encouraged the local authorities to claim their grants for the implementation of plans. An overall change in national policy relating to the provision of roads did not take place until 1975. Only in 1976, the Secretary of State advised the new local authorities, in relation to road building, to make the best use of existing road facilities, especially in the conurbations and large towns. From then on, there was substantial cut-backs in local road construction activities.

National economic conditions are unlikely to have changed over short periods of time. It is only the interpretations of needs within a given set of economic conditions that can change. The changed needs, as interpreted by the then newly elected Labour Government was reported by the Chancellor in the 1975 Public Expenditure White Paper. He stated that, "Compared with the 1972 White Paper (Cmnd 5178) there have been reductions of nearly 40 per cent of expenditure on new construction and improvements of roads in England.[36] These reductions included switching some resources from road construction to rail. Expenditure is also affected by the announcement in the recent Report (HC 74) on the Rate Support Grant (No. 2) Order 1974, in which the Government publicised their decision temporarily to support high levels of revenue support by local authorities to public transport, particularly bus and underground services."

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It will be interesting to quantify the effect of the above statement. This I have done, using out-turn of expenditures given in subsequent White Papers. Relevant details of expenditure by the United Kingdom, for the period 1968/69 to 1977/78 are given in Fig. 15.01-15.04(TABLE)In 1968/69, the total public expenditure in UK in the non-transport sector was £13,790 million (1966/67 price basis which will be used for the rest of this discussion) and in the transport sector was £736 million making a total of £14,526 million. Except for a small decline in 1969/70 the total public expenditure has steadily increased (see Fig15.01-04) until in reached a peak of £17,552 million in the non-transport sector and £1003 million in the transport sector in 1975/76. In the next two years the public expenditure in both the transport and non-transport sectors have slightly declined. For instance in 1977/78 the public expenditure in the non-transport sector was £16,470 million and in the transport sector was £818 million, making a total of £17,288 million.

YEAR	PUBLIC EXPENDITURE TOTAL £ million	as % of 68/69	TRANSPORT £million	% of Total	NON-TRANSPORT £million	% of Total
1968/9	14,526	100	736	5.1	13,790	94.9
1975/6	18,555	128	1003	5.4	17,552	94.6
1977/8	17,288	119	818	4.7	16,470	95.3

Comparing public expenditures both in the transport and non-transport sectors respectively in the late sixties, with that of the late seventies (see above) it can be concluded that in the late 70s, total public expenditure has substantially increased. Also the <u>total</u> transport expenditure has only suffered a marginal decrease in the late 70s, compared with the late 60s, as a percentage of the total expenditure. In real terms the total transport expenditure was 11 per cent higher in 1977/78 compared with 1968/69. Therefore it is reasonable to conclude that cut-back in expenditure is not a prime reason for non-implementation of transport plans in the post-reorganisation period.

15.5 <u>A NOTE ON CONCLUSION</u>

In order to reduce the length of this thesis and because conclusion for the whole thesis will be presented in the next chapter, a conclusion will not be presented for this chapter.

FIGURE 15.01-15.04(TABLE)

	1968.69	69.70	70.71	71.72	72.73	73.74		74.75	75.76	76.77	77.78	78.79	79.80	15.01
1. TOTAL PUBLIC EXPENDITURE - UK	14,526	14,450	14,968	15,467	16,415	16,902		18,373	18,555	17,887	17,288			
OF WHICH														
1(I) NON-TRANSPORT PUBLIC EXPENDITURE	13,790	13,709	14,174	14,687	15,614	16,044	LOCAL	17,400	17,552	16,999	16,470			
(AS PERCENTAGE OF 1968/69)	(100)	(99)	(103)	(107)	(113)	(116)		(126)	(127)	(123)	(119)			
1(II) TRANSPORT PUBLIC EXPENDITURE	736	741	794	780	801	858		973	1,003	888	818			
(AS PERCENTAGE OF 1968/69)	(100)	(101)	(108)	(106)	(109)	(117)		(132)	(136)	(119)	(111)			
(III) TRANSPORT EXPENDITURE AS % OF NON-TRANSPORT EXPENDITURE	5.3	5.4	5.6	5.3	5.1	5.3		5.6	5.7	5.2	5.0			15.02
2. TRANSPORT PUBLIC EXPENDITURE (REPEAT 1(II), OF WHICH	736	741	794	780	801	858		973	1,003	888	818			
2(I) TRUNK ROADS CONSTRUCTION CAPITAL	129	171	208	178	159	175	GOVERNMENT	167	174	147	113			
(AS % OF TRANSPORT PUBLIC EXPENDITURE)	(17)	(23)	(26)	(23)	(19)	(20)		(17)	(17)	(17)	(14)			
2(II) OTHER ROADS CONSTRUCTION CAPITAL	182	177	217	214	166	178		145	143	119	95			
(AS % OF TRANSPORT PUBLIC EXPENDITURE)	(25)	(24)	(27)	(27)	(19)	(21)		(15)	(14)	(13)	(12)			
(III) TRANSPORT EXPENDITURES OTHER THAN ROAD CONSTRUCTION CAPITAL	425	393	368	388	476	505		661	686	622	610			
(AS % OF TRANSPORT PUBLIC EXPENDITURE)	(58)	(53)	(47)	(50)	(56)	(59)		(68)	(69)	(70)	(74)			15.03
3. DISTRIBUTION OF TRANSPORT EXPENDITURES OTHER THAN ROAD CONSTRUCTION CAPITAL (TOTAL AS IN 2(III)														
3(I) TRUNK & OTHER ROAD MAINTENANCE	205	204	207	221	258	265		252	251	232	225			
(AS % OF TRANSPORT EXPENDITURES OTHER THAN ROAD CAPITAL)	(48)	(52)	(56)	(57)	(54)	(53)	REORGANISATION	(38)	(37)	(37)	(37)			
3(II) GRANTS TO BRITISH RAIL (MAINLY REVENUE SUPPORT)	115	66	48	61	63	93		194	179	146	152			
(AS %)	(27)	(17)	(13)	(16)	(13)	(18)		(29)	(26)	(24)	(25)			
(III) LOCAL PUBLIC TRANSPORT GRANTS (CAPITAL & REVENUE)	46	44	51	50	70	78		136	167	158	156			
(AS %)	(11)	(11)	(14)	(13)	(15)	(15)		(21)	(24)	(25)	(26)			
(IV) OTHERS INCLUDING PORTS AND SHIPPING	59	79	63	56	85	69		79	89	86	77			
(AS %)	(14)	(20)	(17)	(14)	(18)	(14)		(12)	(13)	(14)	(12)			15.04
4. VARIATION OF TOTAL EXPENDITURE BETWEEN ROADS AND OTHER PUBLIC TRANSPORT SECTORS														
4. TRANSPORT PUBLIC EXPENDITURE (REPEAT 1(II)), OF WHICH	736	741	794	780	801	858		973	1003	888	818			
4(I) ALL ROADS EXPENDITURE	516	552	632	613	583	618		564	568	498	433			
(AS % OF TRANSPORT PUBLIC EXPENDITURE)	(70)	(74)	(80)	(79)	(73)	(72)		(58)	(57)	(56)	(53)			
4(II) ALL PUBLIC TRANSPORT EXPENDITURE	161	110	99	111	133	171		330	346	304	308			
(AS % OF TRANSPORT PUBLIC EXPENDITURE)	(22)	(15)	(12)	(14)	(16)	(20)		(34)	(34)	(34)	(38)			
(III) OTHERS AS 3(IV) TO MAKE TOTAL														

15.6 NOTES

1. NEW CIVIL ENGINEER (14 May 1981)
   London, Thomas Telford Ltd; p 6

2. Rhodes R (August 1976) The new politics of local government published in LOCAL GOVERNMENT CHRONICLE; p 703

3. Ibid; p 704

4. Ibid; p 704

5. Ibid; p 706

6. Ibid; p 706

7. Refer to page 2.26 of this thesis

8. Although when this was written in February 1982, the Government was considering the abolition of the TPP system, the very latest information is that it has changed its mind again. Refer to SURVEYOR NEWS (8th December 1982).

9. Bayliss D (November 1975) TPPs and the Structure Plans published in THE PLANNER
   London, Royal Town Planning Institute

10. At present the county councils are the highway authorities for all roads even in metropolitan areas.

11. Williams R G (August 1980) GOVERNMENT TRANSPORT EXPENDITURE CONTROLS AND LOCAL GOVERNMENT AUTONOMY
    Unpublished dissertation submitted to the University of Oxford, Department of External Studies; p 31

12. Greater Manchester Transport Action Group (October 1979) EXAMINATION IN PUBLIC - GMC STRUCTURE PLAN
    Manchester, GMTAG, 102 Millgate Lane, para 11.5

13. Bains, M A (1972) (Chairman Working Group) THE NEW LOCAL AUTHORITIES
    London, HMSO

14. Greenwell J (3 September 1976) The true role of the chief executive published in LOCAL GOVERNMENT CHRONICLE, p 809

15. Greenwood S et at (1974) CORPORATE PLANNING IN ENGLISH LOCAL GOVERNMENT
    London, Charles & Knight

16. Nickson J V and Batey P W J (1978) The analysis of transport within a metropolitan county sturcture plan published in TOWN PLANNING REVIEW: VOL 49, p 285-295.

17. Grugeon J (26 November 1976) Officer-Member Relationships published in LOCAL GOVERNMENT CHRONICLE; p 1079

18. Association of Transport Co-Ordinating Officers (31 October 1980) MARKET ANALYSIS PROJECT OF THE NATIONAL BUS COMPANY - A REVIEW

19. Ibid; p 5

20. British Road Federation (September 1979) ROAD INQUIRIES AND OBJECTORS - INFORMATION NOTE AND COMMENT : INC No. 51 London BRF

21. Hillman M et al (June 1973) PERSONAL MOBILITY AND TRANSPORT POLICY London SW1X 8BB, PEP, 12 Upper Belgrave St; p 74

22. For further details refer to references given in Chapter II of this thesis

23. Secretary of State for the Environment (1978) Letter of Approval included in the STRUCTURE PLAN FOR OXFORDSHIRE Oxfordshire County Council, County Hall

24. LAND COMPENSATION ACT 1973 London, HMSO

25. Grant J (1977) THE POLITICS OF URBAN TRANSPORT PLANNING London W1, Earth Resources Research Ltd; pp 92-93

26. Refer to p 230

27. Tyme J (1978) MOTORWAY VS DEMOCRACY London, Macmillan

28. These White Papers have now replaced the original publication "ROADS IN ENGLAND"

29. Department of Transport (1981) TRAFFIC APPRAISAL MANUAL London, 2 Marsham Street, p 1

30. Ibid

CHAPTER SIXTEEN

CONCLUSIONS OF THE STUDY

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A number of writers have claimed that the rejection of urban transport plans began in the 70s. Their reasons for the rejection were based on well publicised events such as the disruption of the road inquiries and cut backs in national expenditures.

In this research, I have developed measures of implementation in order to assess the influences of various factors that led to the rejection of plans. A measure of implementation could record how closely the plan recommendations were followed or they were followed at a specified rate or whether in the specified order. I disregarded the last of these because it was often not easy to record and it was always hard to interpret. I developed separate measures for the first two criteria. They are called the quantitative and rate measures respectively. Based on these measures, I have showed that even before the well-publicised events of the 70s, urban transport plans were poorly implemented and that they were not effectively superseded.

The bulk of this research, was concerned with searching for factors that led to the rejection of urban transport plans. I formed the hypothesis using subjective evidence and then tested the level of significance of statistical relationships between the effect of influencing factors and the associated measures of implementation of plans.

Several factors were identified and their significance as caused for rejection tested. Most natural factors which have been popular as reasons for rejection were found to be insignificant in their effect. Predominantly, local factors appear to have determined the level of implementation of urban transport plans. In the rest of this chapter I will present my conclusions, treating one factor in each section. I will first present, the primary conclusion which relates to the significance of a factor as a reason for rejection. I will follow this with any secondary conclusion, which are spin-offs that resulted from the study of that factor.

The influence of the following national factors are presented: institutional changes and party political control of central government, public expenditure cut backs and national pressure groups.

These are followed by the effects of changes in predominantly local factors: predictive accuracy of studies, local government expenditure party political control of local councils, officer participation and pressure group effectiveness (as measured by socio economic distribution of population and cost of plans).

16.1 SIGNIFICANCE OF INSTITUTIONAL CHANGES AND PARTY POLITICAL CONTROL OF CENTRAL GOVERNMENT

There has been a succession of legislative changes in relation to local government in general and transport planning in particular. The important changes in this area, during the past two decades were:

London Government Act	1963
Town and Country Planning Act	1968
Transport Act	1968
Local Government Finance Act	1972
Local Government Act	1974
Transport Act	1978
Procedural Changes leading from the Leitch Report	

For various reasons, I have excluded London - a special case in many respects and can disregard the 1963 Act.

The two Acts of 1968 and the Finance Act of 1972 had only minor impacts on the transport planning process. There is no evidence that they delayed the implementation of urban road plans.

A major discontinuity in the local government system was brought about by the Local Government Act 1974. I have allowed for this, by initially considering the implementation of plans up to Local Government Reorganisation. Subsequently I have analysed the relative changes in influence of these factors, in the post-reorganisation period.

Until about the reorganisation both the major political parties, during their terms in Government, encouraged road construction. Only in the post-reorganisation period, the Labour Party promoted public transport useage. These are generally reflected in the institutional and economic policy changes.

16.2 SIGNIFICANCE OF NATIONAL PUBLIC EXPENDITURE CUT-BACKS

I provided several pieces of evidence to show that national expenditure cut backs was not a significant reason for the non implementation of plans until the mid 70s. Even after this period, the cut backs in total transport expenditures was roughly in proportion to the total cut backs. However, there has been an internal re-distribution of transport expenditure in favour of British Rail and urban public transport revenue support.

16.2.1 Secondary Conclusion

In the seventies, grants for the provision of urban roads, not taken up by local authorities was spent on the provision of inter urban roads.

16.3 SIGNIFICANCE OF NATIONAL PRESSURE GROUP EFFECTIVENESS

Until the early 70s, national pressure groups, either actively or tacitly supported road building.

British Road Federation influenced the production of Traffic in Towns and helped to maintain local and central government support for road construction.

The Civic Trust supported the provision of roads to remove through traffic from urban areas.

In the early days of the changing environment, the Trades Union Congress initiated the enactment of Transport Act 1968. Subsequently it also influenced other legislation by the Lavour Government tc support public transport.

Policy changes won by national pressure groups were effectively used locally to support public transport, essentially in the post-reorganisation period as an alternative to road building. All pressure groups, including the more recent ones, e.g. Transport 2000 now pursue these local activities.

16.4 SIGNIFICANCE OF PREDICTIVE ACCURACY OF STUDIES

Assumptions about the following inputs, determine the amount of, transport infrastructure provisions recommended in plans.

i) available budget
ii) cost per unit of construction
iii) unit capacities recommended in technical standards
iv) traffic management effectiveness
v) unconstrained future demand

I have shown that there were predictive inaccuracies in some of these inputs. However they did not significantly affect the implementation of plans.

16.5 SIGNIFICANCE OF LOCAL GOVERNMENT EXPENDITURE CUT BACKS

If local authorities are satisfied about the need for specific provisions, they are normally willing to find the financial resources to ensure their supply.

Secondly, the authorities financed their capital expenditures by borrowing. I have shown that, had the authorities wanted, they had sufficient revenue income to borrow further capital for highway construction.

Thirdly, the highways budget was the only one, amongst all the services provided by the county borough councils to have suffered a steady reduction as a proportion to total expenditure, throughout the period under consideration.

Fourthly, no major local government cut back was announced during the period up to 1974.

Therefore, I conclude, that considering cumulative expenditures by county borough councils, there was no evidence to suggest that expenditure cut backs was a significant reason for the low implementation of plans.

This conclusion was further supported by analysis of implementation measures, where I showed that it was the rich county boroughs who mostly rejected their transport plans.

16.6 SIGNIFICANCE OF CHANGES IN PARTY POLITICAL CONTROL OF LOCAL COUNCILS

Party political considerations dominated the affairs of the county borough councils. The success of implementation of a long term transport plan is therefore dependent on the continued control of the county borough council, by the local political party, under whose authority the plan was prepared. This was shown to be the most important of the three significant factors that determined the success of a plan.

Since the reorganisation, the importance of party politics in local

authority decision making has increased further.

16.6.1 Secondary Conclusions:

(i) the large scale local elections swing in favour of the Labour Party in the early seventies did not result in an abrupt frustration to the implementation of approved transportation plans.

(ii) changes in the political control of councils did not normally result in pressure on the chief engineers to purge them out of the office.

16.7 SIGNIFICANCE OF OFFICER PARTICIPATION AS A DETERMINANT OF PLAN IMPLEMENTATION

The continuity of employment of the chief engineer proved to be a significant factor that determined the success of implementation of transport plans.

Even in the post-reorganisation period, the relative influence of the chief officers, within their group, in determining transport priorities has not changed. However, political decision-making has somewhat undermined the influence of chief officer groups.

16.7.1 Secondary Conclusion:

Need for the continuity in employment of technical staff and in supply of data, when plans were prepared by consultants did not significantly affect the implementation of transport plans.

16.8 SIGNIFICANCE OF LOCAL PRESSURE GROUP EFFECTIVENESS AS A DETERMINANT OF PLAN IMPLEMENTATION

Socio economic group (SEG) distribution of households at county borough level can be used, to construct a social resistance scale SR, to measure the quality of pressure group activities that will be developed in a town. Its explanatory power cannot be increased by using SEG distribution at ward or enumeration district levels.

The scale of destruction of a proposed road network, measured in terms of the annual average cost of proposals, per head of population (COST RESISTANCE, CR) proved to be a second useful measure for the scale of pressure group activities against implementing transport plans.

SOCIAL COST RESISTANCE (SCR) the product of CR and SR proved to be satisfactory as a single variable and significant in explaining the impact of pressure group activities on implementation.

The influence of pressure groups in the provision of urban transport has increased in the post-reorganisation period.

16.9 CUMULATIVE INFLUENCE OF SIGNIFICANT FACTORS

91 per cent of the variation in cumulative implementation of plans (FMR) in the pre-reorganisation period can be explained by the variation in the three independent variables, political continuity explaining 56 per cent, chief engineer continuity 21 per cent and social cost resistance explaining 14 per cent of the variation.

Since the local government reorganisation political considerations have grown to be more significant, essentially undermining the influence of the chief officer groups. However, the opportunity for local parties to plan for the long term is undermined further, at present, because of reasons given earlier (see Chapter 15).

In the final Chapter, I will recommend measures to improve plan making, so that the plans could be satisfactorily implemented.

P A R T F I V E

TOWARDS A MODIFIED PLANNING METHODOLOGY

CHAPTER SEVENTEEN

A CRITIQUE OF THE STRUCTURE PLAN-LOCAL PLAN SYSTEM

* * *

* * *

"At present, towns are developing in a way which no one has chosen or seems to like, largely because the control over the transport system has been lost. It must be regained if our towns are to become fit and delightful places for human beings to live in."

Stephen Plowden: 1980

In this research project, local political discontinuity was identified to be the primary cause for the poor implementation of urban transport plans. Pressure group resistance and chief officer discontinuity were also found to be significant causes.

In the post-reorganisation period, political influence has increased further to the detriment of officer participation - an essential element in plan preparation. Pressure groups have also increased their influence. In the next three chapters, I will develop a modified basis for planning that recognises this changed environment.

The following assumption is made with respect to the development of this basis. None of the factors that influenced implementation are solely applicable to urban transport plans. These factors effectively influence any plans, particularly those that are long term. The following implication of this assumption is worth noting.

The bulk of my research, presented in the previous chapters was restricted to transport planning in county borough councils in the pre-1974 period. In this part of the thesis, I wished to apply my findings based on that fairly restricted sample to prescribe remedies to a wider range of local authorities. Therefore any recommendations made can only be of a fairly general nature and would necessarily be speculative. However, such shortcomings are common to most prescriptions based on extrapolation of historical data.

In the post-1974 period, my interest is essentially related to new style structure and local plans (SP-LP system) and the transport policies and programmes (TPP) as against the Buchanan style landuse-transport plans. Before the development of the recommendations, some features of the existing planning system are critically reviewed. A summary of the criticism is provided in Fig. 19.03 (Table), preceding page 19.02. It may be helpful if this is read prior to the detailed analysis which begins in para 17.2.1 (page 17.4) and continues in the next chapter.

17.1 THE PRESENT LANDUSE-TRANSPORT PLANNING SYSTEM IN BRITAIN

The County Councils are the strategic planning authorities under the Town and County Planning Act 1971; their role encompasses both landuse and transport policy.[2] They are entrusted with preparing comprehensive statements of strategic planning policy, termed "structure plans", which should be approved by the Secretary of State for the Environment. These documents cover a period of fifteen years, to be revised every five years or so.

P.T.O.

The detailed applications of the structure plans are covered in local plans, which are generally the responsibility of the district councils, with some involvement of county councils, where strategic issues are concerned. These plans cover a period of 10 to 15 years, subject to periodic review.

In addition the county councils are required to annually submit to the Secretary of State for Transport their Transport Policies and Programmes (TPP) in order to bid for Transport Supplementary Grants (TSG) and capital expenditure allocations.

The TPP is intended to cover the authority's transport objectives over a period of 10 to 15 years and provide a 3 year (formerly 5 years) detailed expenditure programme to be rolled forward annually.

I will comment on these three phases of landuse-transport planning, namely;

(i) Preparation and implementation of structure plans (Section 17.2)

(ii) Preparation and implementation of local plans (Section 17.3)

(iii) O peration of the T.P.P. system (Chapter 18.0)

17.2 COMMENTS ON THE PREPARATION AND IMPLEMENTATION OF STRUCTURE PLANS

Detailed advice on the preparation of structure and local plans (new style development plans) was initially given in the Development Plans Manual issued by the then Ministry of Housing and Local Government in 1970.[3] Since then, a number of revisions have been issued, essentially in order to reduce the time taken to produce these plans. Important revisions in this respect are contained in;

(i) Public Participation - DOE Circular 52/72

(ii) Structure Plans - DOE Circular 98/74

(iii) Memorandum on Structure and Local Plans - DOE Circular 4/79

(iv) Local Government, Planning and Lane (No. 2) Act 1980

John Raine is one of a number of authors who have commented on the above revisions to the Manual. He observed in 1980, that

"It is the issue of speeding up the planning process which underlies almost all the changes proposed in planning procedures, and which seems to be regarded as so important in the government's perception of the way the planning system needs to be modified.

If the process can be speeded up, without any loss in effectiveness then of course the changes are not only justified but should be welcomed. However, many reservations have been expressed and it is considered that possibly too much emphasis has been attached to the question of delay. The fear is therefore that ..... the changes represent a serious challenge to the principles and practice of good planning."

The modifications applied over the past decade have undermined the consistency of the 1970 planning process as detailed in the Manual. Presently planning is in a state of confusion. For instance Circular 98/74 identifies one of the main functions of a structure plan as,

"to provide a framework and statutory basis for local plans."[5]

However, the Local Government Planning and Land Act 1980 redefines what constitutes a count matter, from the Local Government Act 1972, so that it NO longer includes operations or uses which conflict with, or are consistent with the counties' plans and policies.[6,7] Also the 1980 Act abolished the power of a county planning authority to give directions to the district planning authority as to how it should determine an application for planning permission which would substantially and adversely affect its interests as a county planning authority.[8] A county planning authority therefore no longer has the power to prevent a district planning authority granting planning permission for development that is not in accordance with the county structure plan.

Therefore for my comments in this chapter, I will go back to the 1970 version and identify its strength and weaknesses with a view to proposing modifications to it. In this respect, the following advice given in 1979 by the Department of the Environment is worth noting.[9]

"A technical description and explanation of the form and content of structure and local plans are contained in "Development Plans: a manual on form and content'. In general the manual remains a useful guide."

The manual identifies seven functions that need to be performed by a structure plan. In this sub-section, I will comment on the effectiveness of performing six of these functions under the present day, structure planning system. The seventh function is that of providing a framework for local plans, on which comments will be made in the next section.

17.2.1 Interpreting national and regional policies:

The national and regional context for structure planning is essentially drawn from the regional strategic plans, produced by joint central and local government agencies.[10] I will make the following comments on the suitability of these plans as a starting point for structure planning.

FIRSTLY, the regional plans are neither statutory documents nor are they subject to public consultation or challenge.

SECONDLY, they are only reviewed every 8 to 10 years at best. Further, the dates do not normally coincide with changes in party political control of central and county governments. Therefore, regional plans do not reflect government policies for extensive periods of their currency. For instance, the Strategic Plan for the South East recommends a number of satellite towns to accept the overspill population of London.[11] Soon, this policy was reversed. In 1980, the Secretary of State for the Environment issued a two-page comment on the review to the plan, which amongst other things, brought an end to most of the new and expanding town schemes.[12]

THIRDLY, the regional plans are based on traditional prediction methods (e.g. extrapolation of existing conditions) and are too restrictive in their recommendations. For instance the Plan for the South East recommends that for structure planning purposes, Luton should accommodate about 4000 extra persons per year up to 1981, with a slightly lower rate in the following decade and a rate of 3000 per year in the last years of the century.[13] Such details should be a matter for the structure plan.

17.2.2 Establishing aims, policies and general proposals:

The structure plan is expected to contain statements on the planning authority's aims for the area and the strategy, policies and general proposals which are designed to achieve these aims.

In preparing their first set of structure plans most counties undertook long and complicated surveys and analysis.[14] This information was then used to seek positive answers to a number of problems covered by the plan. This approach has two shortcomings.

FIRSTLY, the extensive work involved in preparing the plans makes it impractical to revise them every five years. The plans are further delayed because some county areas are not well-fitted as natural units for landuse planning purposes.[15] Eg. Reading is a town in Berkshire with its northern suburbs in Oxfordshire. This increases the need to co-ordinate the work of several authorities, each progressing their plans to different timetables. Even some structure plans, published in the early 70s are not yet revised. Eg. Hampshire Structure Plan.

County Council elections take place every four years. Structure plans which are not revised to be in line with the incoming county council's policies or those which are not reviewed because of other changes in circumstances are normally disregarded when control changes hands. Eg. The Labour Party, on recently gaining control of the Greater London Council have imposed a general embargo on office development in large parts of London.[16] This policy disregards the approved Greater London Development Plan.

SECONDLY, preparation of structure plans by trend prediction, offers little scope for the positive guidance of development.

Based on an analysis of 40 structure plans, Graham May and Howard Green came to the conclusion that,

"Very little consideration appeared to have been given in the plans to the various selected features of employment change ..... The assumptions in the employment forecasts were found to be either closely tied to recent experience ..... or highly optimistic about a return to high rates of economic growth."[17]

This practice sets unrealistic targets for local plans. Also, the long cycle of plan-making prevents useful feedback of information about unfulfilled past expectations.

17.2.3 Indicating action areas:

The Town and County Planning Act 1968 specifies that structure plans indicate action areas where major change by development, redevelopment or improvement may be expected.

The intention in the late 60s was that landuse plans should indicate fairly comprehensively and at an early stage, possible action areas so that it will assist in the route location of urban motorways.[18] However, at present, the treatment of "action areas" in this manner is recognised as a politically sensitive issue which is particularly unsuitable for inclusion in a structure plan. This requirement is now relaxed and has virtually been unused.

17.2.4 Providing guidance outside local plan areas:

The 1968 Act requires that the structure plan provides a basis for development control in those parts not covered by a local plan. These areas are essentially of a rural character which is not the central theme of this research.

17.2.5 Providing basis for co-ordinating decisions:

Prior to being abandoned in Circular 98/74, the intention was that the preparatory stages of a structure plan should provide a forum for discussion between the various committees of the county and district councils and other public bodies such as statutory undertakers in order to encourage corporate planning. Internally social services, housing and education are the important local authority services in this respect. Authorities attempt to optimize the overall benefits to the community by using corporate planning techniques.

In practice little official guidance is given about the role of spatial planning in reflecting the social and economic policies of the local authorities. Moreover, the traditional rivalries between departments further restrict the effectiveness of the structure plan as a co-ordinating medium.[19] Structure plans are a particularly unsatisfactory mechanism for co-ordinating spatial with social and educational policies in metropolitan areas since the latter services are provided by the district councils whilst structure plans are prepared by the county councils.

Co-ordination of structure plan policies with the strategic plans of other public authorities is also made difficult because these other authorities have no statutory requirements to publish long term plans.[20]

17.2.6 Bringing main planning issues before Minister and public:

The restrictive nature of MINISTERIAL CONTROL during the plan preparations stage was discussed in section 17.2.1. The Town and County Planning Act 1971 requires that the draft Structure Plan be submitted to the Minister for further approval.

Recently it has been noted, that the Government has taken keen interest even in directing apparently local matters. This has resulted in extensive modifications to a number of "submitted structure plans" particularly if the County Council is controlled by a different political party to that of the Government.[21] It is likely that such interference will continue in future, resulting in disturbance to "submitted structure plans" whenever the control of the Central Government changes between the political parties. However

"the approval of a Structure Plan does not convey approval for other statutory purposes.[27] In particular, it does not commit the Department of the Environment or any other Government department to the payment of grant on any particular project or to the amount or timing of any capital expenditure programme."

I would argue that the ministerial control described alone makes the Structure Plan/local plan system *e* sufficient vehicle for the control of some local government expenditure by the central government. The annual submission of TPP could therefore be disposed with. I will develop this theme later in chapter nineteen.

Since 1972, the opportunity available for PUBLIC PARTICIPATION in structure plan inquiries (Enquiry In Public - EIP) has been substantially reduced. Since then the Secretary of State for the Environment, in considering a "submitted structure plan" MAY hold an Examination in Public. Even then the EIP is only intended to bring the public opinion on the broad policy issues contained in the "submitted structure plan" to the attention of the Secretary of State and not to give the inquiry the status of a formal hearing. The Secretary of State need not take public representations into consideration in approving a structure plan. The intention is that public consultation should take place essentially at the plan preparation stage.

I contend that the proposals at this stage are too vague for individuals to comment usefully. Also Drake and Thornley noted that,

"Public participation as part of this process is constrained by the time-schedule of plan-production[23] ..... In our case studies, the result of public participation exercises have, in most cases lagged behind the planning process, so that by the time they are received, the planners may have moved on to the next stage in planning and the public input cannot be fully integrated at the relevant stage."

Public acceptance of plans as manifest in local pressure group activities were identified in this thesis as an important influence on the success of implementation. Therefore recommendations contained in chapter 19 provide improved opportunities for public participation.

17.3 COMMENTS ON THE PREPARATION AND IMPLEMENTATION OF LOCAL PLANS

Just as the structure plans are prepared within the context of national and regional policies, it was intended in the Manual, that the structure plan should set the content within which local plans are prepared. Thus the broad policies and proposals in the structure plan form a framework for the more detailed policies and proposals in local plans.

There are three types of local plan: action area plans, subject plans and district plans. I have already explained the nature of action area plans. A subject plan deals with specific aspects of planning such as "mineral working". They are called by the name of the "subject" to which they relate and is normally prepared by the county council. The district plan is concerned with the detailed planning of an area of substantial size "where the factors in local planning need to be studied and set out in a comprehensive way."[24] They typically relate to the whole of a small town or a major sector of a larger one and are normally prepared by the district councils. In the content of this chapter, an examination of "local planning and implementation" as applied to district plans is sufficient to appreciate the various issues.

The Development Plans Manual identifies four functions that need to be performed by a district plan:[25]

(i) applying the strategy of the structure plan
(ii) providing a detailed basis for development control
(iii) providing the basis for co-ordinating development
(iv) bringing before the public local and detailed planning issues

I will now comment on the effectiveness of performing these functions as intended in the Manual.[26]

17.3.1 Applying the strategy of the structure plan:

FIRSTLY, I will comment on the problems that arise from the influence of party politics in local government. In chapter 15, I explained the difficulties involved in the two tier control of some local government functions.

For a number of reasons to be explained later in this section (§ 17.3) it has proved to be difficult to review structure and local plans every 5 years or so and still maintain all the requirements as originally specified in the Development Plans Manual. On the other hand the county council elections take place every four years and the district council elections every four years or annually, in which case one-third of the councillors retire before each election.

The frequent changes in political control of county and district councils during the currency of a set of structure and local plans lead to inflamation of the difficulties in two-tier control. Better co-ordination of plan reviews with local elections would help successful implementation.

SECONDLY, lack of co-operation, even between county and district councils controlled by the same political party is common place. Buxton commenting on mutual co-operation noted that,

"The Government's intention is to see the county and districts operating as free agents.[27] Excepting in those situations in which the legislation specifically provides the County Council an upper hand, any influence that County Council, in persuit of their statutory responsibilities for establishing and maintaining the general strategic policies within their areas wish to exert over the activities of the district council,will depend on the latters consent."

Even the legal redress available to the counties against a district acting "ultra vires" was questionned by Bunton. He showed that the combination of provisions in the 1972, Local Government Act produced oddly inconsistent results when applied to resolve disputes between counties and districts.

THIRDLY, there are difficulties encountered in the two tier system of local government, even where mutual co-operation exists. When the new style development plans were introduced in 1968, the intention was that the whole planning process would be administered by one authority, the pre-1974 county councils. This assumption necessarily affected the content of the rules made for the development plan procedure but the rules were hardly revised to assist the two-tier planning processes.

Under the old regime, the relationship between the structure and local plans was left comparatively obscure, the local plan being merely required to confirm generally to the structure plan. Nothing in the structure plan was intended (because before 1974 nothing was necessary) to serve the rather different purpose of exercising any form of detailed control over the makers of the local plan.

This assumption is invalid in the post-reorganisation period, when the two plans are made by different teams, working for different authorities, the series of local plans being published a number of years after the structure plan. Bunton commented on this type of arrangement

"It has been suggested that a local plan may be regarded as a statement of further and better particulars, demonstrating a more detailed aspect of town planning which in the structure plan is merely sketched as a matter of policy and not worked out in any detail.[28] Further and better particulars are, however, most normally and most usefully given by those who drew up the statement that is to be particularised. Confusion, rather than illumination is more likely to follow when one authority attempts to amplify and particularise anothers plan."

FOURTHLY, there are the practical difficulties in plan implementation.

A number of practical difficulties in implementing the structure plan policies came to light only when detailed studies are carried out in local plan stage or even afterwards. Eg: geological problems needing expensive foundations to develop a site.

Normally, sufficient land is allocated in the development plans to provide for a period of 10 to 15 years. Chief Officers having spent a number of years preparing the plans become committed to their implementation. Therefore, even if a plan proves to be impractical, they may prefer to have another attempt to solve the problem rather than accept rejection of their plans.

Delays identified above, even if they paralyse action for a few years, would significantly affect implementation, if political control of councils changes hands. Delays in implementation would also provide an opportunity for resistance groups to gain momentum and add their weight to rejecting the plans.

17.3.2 Providing detailed basis for development control:

A local plan must provide information to developers by allocating sites for particular purposes, by defining the areas to which particular development control policies will apply and by expanding these policies in terms of standards and other criteria.

Professor Peter Hall identified inflexibility as the major problem in allocating sites in the above manner.[29] He stated that,

"Some authorities zone land for residential development, whether or not the land is suitable for development or whether or not the owner wants to develop it. This is one good reason for the paradox in many areas, that developers complain while the planning officers insist that there is 5 to 10 years supply."

17.3.3 Providing a basis for co-ordinating development:

The Development Plans Manual states that,

"The planning policies and proposals in local plans will be used as a basis for co-ordinating public and private development and expenditure over the areas covered by them."

Problems in co-ordination arise due to the limited nature of powers available to the local authorities to positively encourage private development. For instance, the grant of a planning permission increases the value of a piece of land, in many cases to several times the existing value and the owner of the land gains substantially.[30] Also it is difficult and expensive for the authority to revoke the permission, even if the development is not completed for a number of years. However the owners is under no obligation and the local authority has only limited powers to force development of the land.

17.3.4 Bringing local and detailed planning issues before public:

The structure plan is a broadly based document whose implications for the individual are difficult to identify. The local plan proposals provide the first opportunity to assess the losses to individuals; yet it is normally the case that objections to a local plan are determined by the proposing district council itself. This procedure indeed reduces the rights of the individuals even when compared with the old style development planning procedures where an aggrieved citizen had a right to a public inquiry, with the outcome determined by the Secretary of State.[31]

In the recommendations in chapter 19, I have increased the opportunities for public participation in local plan preparation compared with that provided by the Manual.

17.4 CONCLUSION

The basis of present day structure and local planning system is explained in the Development Plans Manual. Subsequent revisions to the system were mainly intended to expedite plan preparation rather than to improve it. Therefore improvements to structure and local planning methods should be related to the functions of the plans as identified in the Manual.

The important functions of a structure plan are:

(i) Interpreting national and regional policies
(ii) Establishing aims, policies and general proposals
(iii) Providing basis for co-ordinating decisions
(iv) Bringing main planning issues before Minister and public
(v) Providing a statutory basis for local plans

The important functions of a local plan are:

(i) Applying the strategy of the structure plan
(ii) Providing a detailed basis for development control
(iii) Providing the basis for co-ordinating development
(iv) Bringing before the public local and detailed planning

It is concluded that most of the published structure and local plans did not fulfill their intended functions because of a number of difficulties, including constraints in resources and in adapting planning procedures designed for unitary authorities for operation by a two tier local government system.

* * *

17.5 NOTES : CHAPTER XVII

1. Plowden, S. (1980) TAMING TRAFFIC
   London WC1, Andre Deutsch Ltd., 105 Great Russel St., p.197

2. Enactments relating to structure and local plans were initially contained in the Town and County Planning Act 1968. The provisions were re-enacted in the consolidating Town and Country Planning Act 1971. Amendments to the 1971 Act have been made by the Town and County Planning (Amendment) Act 1972, the Local Government Act 1972 and the Inner Urban Areas Act 1978. The Town and Country Planning (Structure and Local Plans) Regulations 1974: SI 1974 No. 1486, deal with the procedure for brining into operation and the form and content of, plans prepared under Part II of the 1971 Act.

3. Ministry of Housing and Local Government (1970) DEVELOPMENT PLANS: A MANUAL ON FORM AND CONTENT
   London, H.M.S.O.
   A number of revisions and guidance have been issued since the publication of the Manual. The latest comprehensive guidance is contained in:
   Department of the Environment (1979) CIRCULAR 4/79
   London, SW1P 3EB, Department of the Environment, 2 Marsham Street

4. Raine, J. (June 1980) Changing Planning Prodedures published in THE LOCAL GOVERNMENT PLANNING AND LAND BILL: A SERIES OF SHORT ESSAYS
   Birmingham, Institute of Local Government Studies, The University; p.40

5. **Refer to page 2.27 of this thesis**

6. **Raine J (May 1980) Changing Planning Procedures published in THE LOCAL GOVERNMENT PLANNING AND LAND BILL**
   Birmingham, The University; pp 37-41

7. **Also refer to page 232 of this thesis**

8. **Raine J**
   Op cit p 38

9. **Department of the Environment - CIRCULAR 79/79**
   London, HMSO

10. Regional Plans are normally produced by a team representing the Government, the Economic Planning Council for the region and a Standing Conference of Local Authorities for the region.

11. South East Joint Planning Team (1970) STRATEGIC PLAN FOR THE SOUTH EAST
London, Ministry of Housing and Local Government, pp. 80-87

12. Refer to 2 page revision for South East Plan

13. As 12 above

14. A select "first wave" of planning authorities began their structure planning work in 1969/70. By 1971 a number of authorities had begun their structure plan work. However DOE Circular 98/74 issued in 1974 advised that local authorities should avoid "unnecessary expense and time" and to do so their efforts should be "concentrated on what is essential" for the Government looked for a complete set of first SPs by not later than April 1978.
It is unlikely that subsequent revisions will take this long. However my estimate based on current progress of a few SPs is that revisions are likely to take in excess of 2 years.

15. Drake, M., Mc Loughlin, B., Thompson R and Thornley J. (1975) ASPECTS OF STRUCTURE PLANNING IN BRITAIN: RESEARCH PAPER CES RP 20 London, WC2, Centre for Environmental Studies, 62/65 Chandos Place, p.14

16. **Offices Blocked published in PUBLIC SERVICE AND LOCAL GOVERNMENT (October 1981) p 17**

17. May, G. and Green H. (1981) FUTURES
London
vol 13, No. 2, page 93

18. Minister of Transport (1965) ROADS IN ENGLAND AND WALES
London, H.M.S.O, p.16

19. Drake, etal; op, cit., pp. 55-68; pp. 71-101

20. Ibid; pp. 69-70

21. Nearly all transport proposals for Oxford City as proposed in the (Submitted) First Structure Plan for Oxfordshire was deleted by the Government and proposals contained in the "Balanced Transport Policy" promoted by the Oxford City Council were substituted. It is sometimes claimed that this is essentially a political decision where the Labour Government of the mid-70s decided to support the Labour controlled Oxford City Council rather than the Conservative County Council.
Also in examining 11 other structure plans, I found that extensive modifications that were not necessarily national or regional in character were made by the Government. Transportation policies have been altered more frequently than other policies.

Oxfordshire County Council (1979) STRUCTURE PLAN FOR OXFORDSHIRE
Oxford, Oxfordshire County Council, County Hall; pp. VI-IX

Co-Ordinating Committee on Structure and Local Plans (April 1976)
CITY OF OXFORD - A BALANCED TRANSPORT POLICY
Oxford, Oxford City Council, City Hall

22. A note to this effect forms part of the "certificate of approval" granted by the Secretary of State for the Environment. For instance refer to;
Oxfordshire County Council, op.cit, p. XI

23. Drake, et al; op.cit., pp. 122-130

24. Ministry of Housing and Local Government (1970)
DEVELOPMENT PLANS: A MANUAL ON FORM AND CONTENT
London, H.M.S.O., pp. 47-53

25. Ibid; pp. 48-49

26. The Development Plans Manual specifies three further functions to district plans. These are (i) in general to set out the planning policies to each area, to restate and amplify the long-term planning intentions, to describe specific proposals and to lay down development control criteria, (ii) in urban areas to apply the S.P. policies for environmental planning and management, (iii) in rural areas to apply the S.P. policies to managing the rural areas.

In order to reduce the length of presentation and to avoid repetition, I have examined these policies as part of the first three of the four local plan functions.

27. Buxton, R. (Feb. 1974) "PLANNING IN THE NEW LOCAL GOVERNMENT WORLD" in JOURNAL OF PLANNING AND ENVIRONMENT LAW
London, Sweet & Maxwell Ltd., 11 New Fetter Lane, EC4P 4EE; pp. 60-70

28. Buxton, R.; Loc.cit

29. Hall, P. Gracey, H., Drewett, R. & Thomas, R. (1973)
THE CONTAINMENT OF URBAN ENGLAND - VOLUME TWO
London, PEP, 12 Upper Belgrave Street and
London, George Allen & Unwin Ltd., pp. 434-435

30. Distribution of development gains between the developer and the public is a politically sensitive issue. At one extreme the Uthwatt Committee advocated in 1942, nationalisation of development land leading to public retention of most development gain. Labour Governments have from time to time attempted to adopt watered-down versions of the above approach without much success. At present the Conservative Government is attempting to reduce the power of Local Authorities requiring that developers should replay a part of the development gains back to the community. This repayment at present involves the developers paying for inter-alia community facilities; Eg: a recreation ground associated with housing development.
Uthwatt, et.al. (1942) EXPERT COMMITTEE ON COMPENSATION AND BETTERMENT, FINAL REPORT CMND 6386
London, H.M.S.O. p.32

31. For instance, refer to Whitney, D. (Jan. 1974)
ATTITUDES TO THE PUBLIC in THE PLANNER
London, The Royal Institute of Town Planning, 26 Portland Place, W1N 4BE., Volume 60, No. 1, pp: 496-498

CHAPTER EIGHTEEN

A CRITIQUE OF THE TRANSPORT POLICIES AND PROGRAMMES (TPP) SYSTEM

.....

" ... there should be a single process which expresses itself on the one hand in TPPs, for the purpose of grant and resource decisions and on the other in structure and local plans .... (which) would form a framework for TPPs."

DEPARTMENT OF THE ENVIRONMENT: 1973

Unlike structure and local plans, the Transport Policies and Programmes (TPP) is not a statutory document. The intention is that TPPs should stem from the structure plans in order that the SP-LP and the TPP will together promote co-ordinated planning.

In this respect, I will comment on the difficulties involved in:

(i) deriving TPP from the structure plan policies;

(ii) promoting an internally co-ordinated TPP.

The TPP and the Transport Supplementary Grant (TSG) system are devised to fulfill these further functions.[2] These are namely to:

(iii) eliminate bias towards capital or current expenditures or towards particular forms of expenditure;

(iv) reduce the degree of supervision of Government over individual schemes;

(v) distribute central government grant in a way that reflects as far as possible the needs of individual areas.

With respect to the last function, the Government has never explained the basis for the estimation of needs, neither is there any evidence to believe that the Government considers need as a significant factor in determining TSG.[3] Therefore, I will not comment further on the success of meeting this objective.

18.1 THE TPP AND THE STRUCTURE AND LOCAL PLANS

Five problems in translating structure plan policies into TPPs were discussed in Chapter 16. They are;

FIRSTLY, the long cycle of the land-use plans compared with the TPPs, which are revised annually. This results in TPPs reflecting the changed transport policies which might eventually be incorporated in the structure plan. For instance, the Councils which have changed hands to Labour control at the recent elections, would reflect their policy to favour bus revenue support, initially in their TPPs, with apparent disregard to the structure plans.

SECONDLY, the exclusion of trunk roads from local control which is not conducive to co-ordinated land use-transport strategy.

THIRDLY, excessive Government controls on the detailed allocation of TPP funds which stifles local choice of transport programmes.

FOURTHLY, departmental loyalties of the committee chairmen and their chief officers which seek to undermine the corporate approach to the provision of services.

FIFTHLY, the powers available to the district councils to undermine the authority of county council to determine transport policies. For example, the County Council is the highway authority but district councils have power to provide off-street parking.

In addition, two further difficulties arise:

SIXTHLY, the county council can back-track on infrastructure provisions, outlined in the development plans and even in the TPP. Such back-tracking has become fairly frequent, normally resulting soon after changes in political control of local councils.[4] An example of such an instance, in the case of Liverpool Inner Ring Road was given in Chapter 16. Back-tracking may result in hardship to the public because of the following reasons.

Householders along the abandoned route would have unnecessarily suffered from blight for a long time.[5] Even if the blight is lifted, it is unlikely that conditions would significantly improve, partly because of the lasting worry by the residents that the Council can change its mind, when the political control changes hands and partly because a number of buildings along the route would have been purchased by the Council and poorly maintained awaiting their demolition for the new route.

Moreover, large-scale developments need a few years lead time before construction can begin. If councils back-track within the last few years, from providing the infrastructure as detailed in their plans, this results in significant losses to the private developer. However, the councils cannot be held liable for refusing to proceed according to the plans.

LASTLY, the implementation of programmes contained in the TPP and the land-use plans are co-ordinated only through time. Projects only linked through time can loose synchronisation if their implementation depends upon different departments. For example, delay in construction of an estate often results in the unnecessary provision of relief roads.

18.2 PROMOTING INTERNALLY CO-ORDINATED TRANSPORT POLICIES AND PROGRAMMES

The TPP provide details of five inter-related transport expenditure streams, namely;[6]

(i) highway maintenance
(ii) highway investment
(iii) road safety, traffic management, car parking and related expenditures
(iv) public transport revenue support
(v) public transport investment

Major public transport investments were in vogue during the early 70s, however at present they are out of fashion.[7] The larger public transport schemes were the subject of special studies, unrelated to the TPP, e.g. Tyneside Metro. I will not comment on public transport investment appraisal procedures any further.

18.2.1 Appraisal of Highway Maintenance Schemes

Highway maintenance accounts for a large fraction of TSG eligible expendutures. In the UK, it accounted for 39 per cent of all expenditures eligible for TSG during 1978/79.

There is no mechanism to co-ordinate the highway maintenance budget with the rest of the TPP expenditure. However, internal consistency within the MAINTENANCE programme is achieved, based on techniques derived from those initially described in the Marshall Report.[8]

The technique involves assessment of the condition of roads in terms of surface qualities (e.g. surface deformation) and on the volume and character of traffic using the road. Based on information collected for all the lengths of road forming the highway authority's network, competing maintenance schemes are given "priority-ratings".[9] The process involves many

subjective judgements, for instance, in comparing the need to repair a footway with that for reconstructing a road. However, the process is unsuitable for co-ordinating maintenance expenditure with the rest of the transport programme nor indeed for this type of judgement to be discussed by politicians or public. In this respect, it has been said by Bridle that, "Marshall sought a uniform system (of highway maintenance standards) that can be adopted throughout the County so that areas of greatest maintenance needs can be identified, uninfluenced by geographical or POLITICAL considerations."[10]

18.2.2 Appraisal of highway Investment Proposals and Highway Design

Highway investment proposals require extensive justification on admission to the detailed programme within the TPP. The Department of Transport (D Tp) requires amongst other things, information on "Estimated benefits - e.g. COBA if applicable, impact on the environment and accident statistics" to be supplied as the programme progresses through the annual TPP cycles.[11] In particular, major highway schemes including most urban schemes should be justified in economic terms using the COBA 9 computer program. Further the standards for the provision of new roads are determined outside the TPP process, essentially based on "National Traffic Forecasts" and national design standards.[12]

COBA (Cost Benefit Analysis) is a procedure for comparing the costs of road schemes with the cumulative long-term economic benefits derived by the road users, the result being expressed as "Net Present Value".[13] The two flow charts, based on those provided in the COBA 9 manual, set out the procedures in outline (see Fig. 18.01) and in detail (see Fig. 1802).[14] It is the estimation of user benefits that present most of the difficulties involved in applying COBA to urban areas.

Firstly, there are the errors associated with the estimation of traffic flows (see Box 1 in Figure 1802). Traffic can be classified as that which operates within an urban area (internal traffic), those vehicles that visit an urban area from outside or vice versa (terminal traffic or internal-external traffic) and those vehicles that are "passing through" (through traffic or external traffic).

FIGURE 18.01

COBA EVALUATION SYSTEM

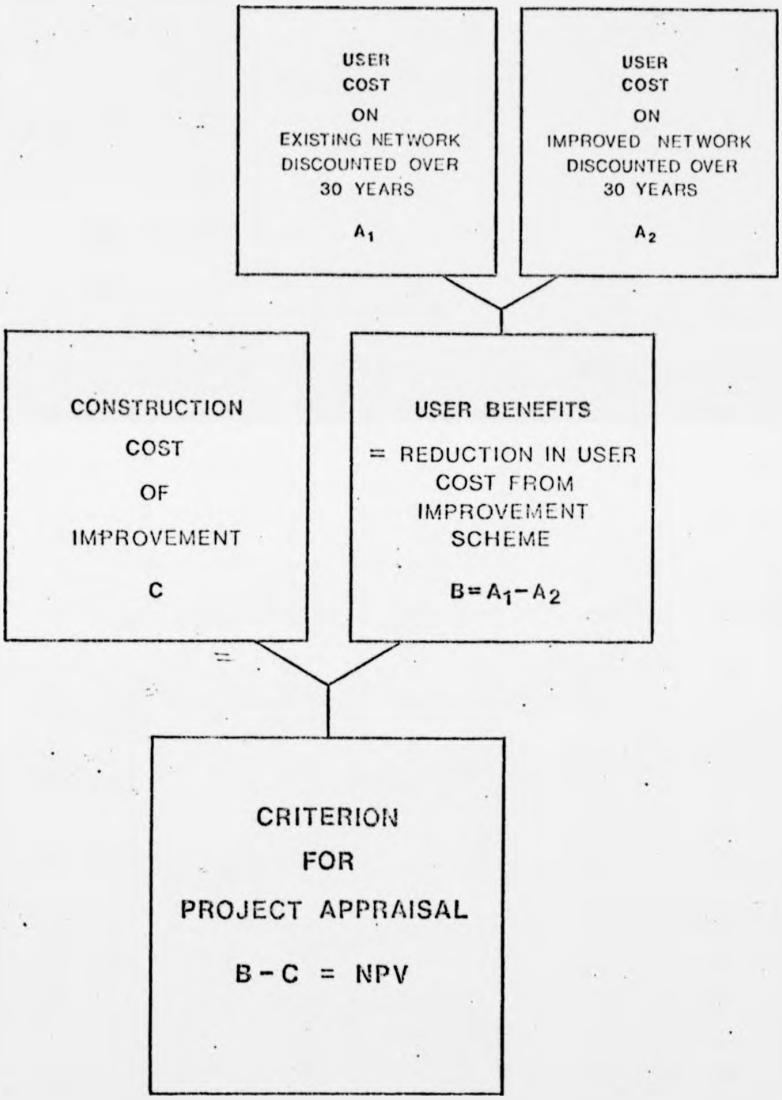

DIAGRAM A

FIGURE 18.02

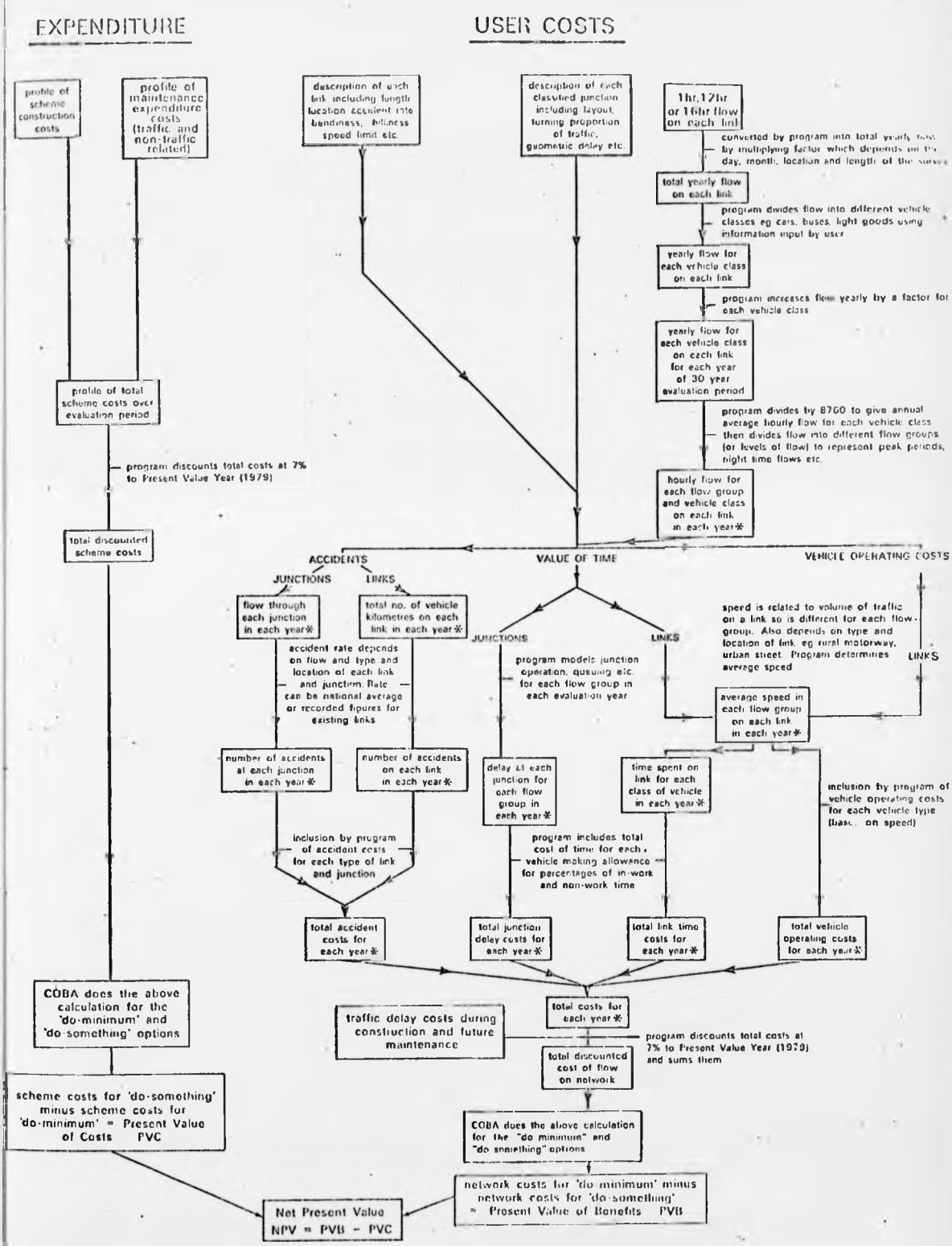

DIAGRAM B

The COBA programme needs as input data, the volume and speed of traffic that uses each existing and proposed link within an area of influence which extends well beyond the town.[15] All this information needs to be classified by vehicle type and should normally be provided over a period of 30 years. The quantity of traffic and its speed are the two important variables which determine "user costs" and therefore the accuracy in estimating these two variables is extemely important for COBA. However, a number of expensive surveys are needed to build a mathematical model of existing traffic, particularly internal traffic, and then even assigned flows in urban areas have proved to be significantly inaccurate compared with ground counts.[16] Even where an acceptable model of the existing traffic is formulated, prediction of future traffic has proved to be notoriously inaccurate even over a period of a few years. The reasons for these difficulties were explained in Chapter 9.

Secondly, there are errors in estimating the travel time associated with varying levels of flow. User costs in COBA are based amongst other things, on the sum of individual costs incurred in travelling on each link and through each junction described in the network (see Box 2 in Fig. 18.02). The COBA manual states that,

> "The surveys (Urban Congestion Surveys 1963 to 1971 from which urban road speed-flow relationships are derived for COBA) are not intended to provide relationships to estimate speeds on individual links in urban area; in practice urban speeds depend more on junction geometry and turning movements than on link characteristics; and complex relationships would be required to provide reasonable estimates of speeds on each link. However, the surveys do provide sufficient information to estimate AVERAGE speeds in towns."[17]

In this respect, it is also worth noting, that the COBA manual normally prohibits the modelling of urban junctions, all urban speed-flow characteristics having been averaged over the network by a pair of linear functions.

The treatment described above may be acceptable when applied as part of an evaluation package for inter-urban roads, as suggested by the Leitch Committee.[16] This is because the external and

internal and internal-external movements contribute substantially to the benefits associated with such roads. These two types of movements can be modelled within acceptable albeit crude ranges. However, in urban areas, because a greater proportion of the benefits are based on internal flows the calculations are crude in the extreme.

Thirdly, in urban areas, a major proportion of benefits is achieved by reduction in accidents. In COBA, for any link or junction, accidents are assumed to vary with respect to a single variable, the total vehicle flow. The limited number of research work published, express doubts on the validity of this assumption, particularly when the flow is high and speeds are less than 40 kph, as is normally the case in urban areas.[19] Moreover, the monetary values associated with accident losses are highly subjective.

Fourthly, traffic category proportions (e.g. proportion of heavy vehicles) are an important factor that determine the travel costs associated with a road network.[20,21] For instance, it is several times more expensive if delays are incurred by a heavy goods vehicle than by a car on a leisure trip. However, the programme assumes a single traffic category proportion as over all options to be evaluated. This is clearly inadmissible in urban areas where the number of specially restricted roads (such as bus-lanes and lorry routes) varies from option to option.

Fifthly, the COBA programme assumes that the traffic flows incorporated in the do-minimum and the do-something options for a given year are all derived from the same "origin-destination" table - fixed trip matrix assumption.[22] This assumption is particularly crude for application in urban areas. For instance, there can be significant variations to the trip-matrix due to traffic redistribution associated with the amount of additional road space and parking facilities. Adjustments to accommodate variable matrices rapidly lead to complications and reduced usefulness of the output.

In this discussion, I have only outlined the major errors associated with the evaluation of urban road schemes using COBA. Pro-ponents of COBA would claim that irrespective of these

inaccuracies, the procedure enables schemes to be compared in terms of value for money nationally, locally and between several options. However, this is also the basis for the major objection of using COBA, because it is probably true that approval from the Department of Transport is fairly automatic provided that a proposed scheme is shown to have acceptable "economic net benefits" irrespective of other environmental and social disbenefits.[24]

HIGHWAY DESIGN standards and the methods of forecasting traffic flows are essentially covered respectively in the following Department of Transport publications.

(i) Department of Transport (1981) DEPARTMENTAL STANDARD TD9/81, ROAD LAYOUT AND GEOMETRY

(ii) Department of Transport (1981) TRAFFIC APPRAISAL MANUAL

These publications extend and provide further information on using COBA method to highway design.[25, 26] However, in reply to criticisms on the reliability of COBA and the traffic forecasts, the Department of Transport has recently developed a more elaborate COBA procedure which employs inter alia a range of traffic forecasts.[27] The intention is that generally the design with the best net present value using COBA should be accepted. The approach is intended for the design of both urban and rural roads.[28]

For the above reasons, I question the validity of using COBA programme for urban scheme justification and the role of DETAILED traffic predictions for determining the standard of provision of urban roads. Also the vast amount of independent assessments undertaken for road schemes distract attention from arriving at internally co-ordinated urban transport policies.

18.2.3 Appraisal of Road Safety, Traffic Management, Car Parking and Related Expenditures

Injury accidents are reliably monitored throughout the County and remedial measures are often undertaken in a systematic manner.[29] Remedies include traffic management, local improvements and road-user education. Some of these measures are undertaken for other purposes such as increasing the road network capacity.[30] Fairly extensive area-wide traffic control measures are also undertaken under this head.

Justification for expenditures under this head normally concentrates on before and after effects rather than on relative value for money in a co-ordinated transport strategy. Some research has been undertaken to assess costs and benefits associated with this type of expenditure so that it can be compared with alternative highway investment.[31] There are two major difficulties associated with such exercises. Firstly, changes associated with an improvement are normally widespread and not easily measured. For instance, the pedestrianisation of a shopping street increases traffic flows in the surrounding network. Also the effect of the scheme on accidents cannot be easily assessed. This is because measurements have to be undertaken for a long period of time over an unchanged network to arrive at statistically significant conclusions. Secondly, there are the uncertainties in the values of time and life already referred to.

Therefore the expenditure on these measures are not co-ordinated with any of the other TPP expenditure streams. However, the emotive nature of accidents and the immediate changes associated with traffic management measures attract disproportionate political and pressure group attention compared with other costlier measures.

18.2.4 Appraisal Methods for Public Transport Revenue Support

A number of formulae are used by local councils to subsidise competing public transport services. However some of these methods are extended to provide a co-ordinated transport strategy.

Cole described the approach used in Cheshire to select services for subsidy.[32] The method is operated as follows. Firstly, a three-year revenue deficit forecast and consequent local authority support necessary for bus-operations to remain at the existing level is made. Secondly, various assumptions are made to allow for the Central Government grant likely to be available to support public transport. The balance needs to be supported from local funds. If the pre-determined revenue support does not cover the balance, then a cost-benefit approach is used to select that network of operations which will produce

the highest cost-benefit ration. Clearly this method is not co-ordinated with other transport expenditures.

The recommendations of the D Tp is to maintain existing bus network, subject to good house-keeping economics and service revisions in response to change in need.[33] However need is notoriously difficult to measure.[34]

Slater described the "needs approach" used in Gwent County Council.[35]

In this method, services are selected for support based on a three-stage formulae. Stage I is described as a coarse sieve based on the proportions of elderly people, the proportion of young people and the proportion of married women living in a district. Districts with high proportions of these population are ranked high in "need" for public transport revenue support. In Stage II of the analysis an "accessibility correction" is made to the Stage I "need" index. In stage III the "need" score is compared with a "satisfaction" score based on existing service level in the district under consideration, so that communities can be arranged in order of priority to undertake improvements to standards of services.

Objections to this method are that firstly the system is operated independent of other transport expenditure, secondly the premature qualification of "need" prevents political judgement to operate fully and finally that it does not take into consideration the adaptability of people, in making private arrangements to satisfy their needs.

Oxfordshire's approach to the problem is to encourage public transport user groups to identify local transport services that need subsidy.[36] The user group then has to urgue its case for the County to retain any loss-making operations or to start afresh any other subsidised services. If the plea is justified the County examines alternative ways of meeting the need, including the payment of a subsidy for a public transport operator to man a regular service. The operator is selected by open tender. The demands for the subsidised services are monitored in order to provide data for subsequent revisions.

In Oxfordshire, because the plea is made directly to the politicians, there is some flexibility in finding the total revenue support budget and it is also possible to take into consideration, the distribution of funds among all the other expenditure streams. However there is no evidence that even in Oxfordshire, transport expenditures is fully co-ordinated.

18.2.5 Current Attempts to Co-Ordinate TPP

In some local authorities, limited attempts have been made to co-ordinate the various transport expenditures. The methods are based on cost-benefit analysis (CBA), Goals Achievement Matrix or some combination of these two methods.[37] The CBA techniques are similar to those used in COBA. In Greater London Council, the CBA technique is adapted to use a points system instead of monetary values. In the GAM approach the objective is to formulate a matrix where rows of different expenditure proposals are point-scored according to fulfilment of pre-defined objectives. If a proposal wholly fulfilled an objective it is given a full score based on the importance of that objective. Partial satisfaction is scored pro rata.

Objections to the GAM and CBA methods are as follows:

(i) Politicians are asked to choose and weight abstract policy objectives in GAM or value abstract benefits in CBA as opposed to judging problems and solutions as they are presented.

(ii) It is difficult to reflect the arguments of pressure groups directly within the systems.

(iii) The vast amount of assessment work involved makes it necessary for the bulk of the work to be completed by fairly junior staff who will have to make several subjective judgements in scoring the goals (costs and benefits) achieved without full appreciation of council policies.

(iv) The cost of implementing a project is not reflected in the effort involved in scoring (GAM only) that project. For instance, a minor traffic management scheme involving a few thousand pounds may need as much attention as a major highway scheme.

(v) There is no built in mechanism, in either CBA or GAM that requires a co-ordinated approach to transport appraisal.

(vi) Finally and most importantly, the premature quantification of survey data make the results of such exercises to be of little value for political decision making. Particularly if the politicians do not agree with the priority given to selected projects which they judge to be important, they are likely to ignore the professional advice incorporated within the system.

18.3 ELIMINATION OF BIAS TOWARDS PARTICULAR CATEGORIES OF EXPENDITURES

It is sometimes claimed that there is an input bias in TPP towards capital, road expenditures. This is because in most counties the highway capital input to the TPP is taken not from the structure plan but from a separate major highways capital expenditure plan or a transportation plan.[38] I will question the role of these "two documents" within the context of the "structure plan-TPP local plan" system. However, the following advantages are claimed by the proponents of this system.[39]

Firstly, that it helps the authority to promote flexibility in transport planning and avoids commitments to long term, large scale expenditures. The flexibility arises because the two documents (unlike the SP and LP) are non-statutory. However, this argument is unjustified for the following reasons.

(i) The flexibility claimed is short lived because the "two documents" are published by the local authority and would have been cited by the authority in "local searches" conducted for the purchase of property within the area.

(ii) It is not flexibility that is gained in this approach but independence from public scrutiny and the need to justify the proposals in terms of landuse strategy.

(iii) Transport proposals that are evolved as part of a co-ordinated landuse-transport strategy are easy to explain and would have been discussed in principle at the structure planning stages and then in detail, at

the local planning stages. Proposals identified by such process are less likely to meet with public resistance than schemes essentially based on technical analysis. I have already shown that public resistance is an important reason for authorities needing to back-track from proposed schemes.

Secondly, it is sometimes claimed by the proponents that the statutory processes controlling the construction of urban transport infrastructure are so slow that a longer lead time than that covered by structure and local plans is required. The counter-arguments are as follows:

(i) It normally requires not more than a decade under the traditional transport planning process from the identification of an urban road scheme to the beginning of construction. This period can be significantly reduced by co-ordinating the proposal with landuse plans and by changes to the statutory procedures. A method of reducing the pre-construction period by at least five years by introducing changes to the statutory procedures was described by Robin Wilson.[40]

(ii) The transport planning methodology is inefficient in predicting long term trends. Therefore it is better to select a long term strategy acceptable with a number of possible out-turns rather than to test a limited number of detailed network plans.

(iii) The bulk of the design and statutory work necessary for individual road schemes are carried out only about three years before construction. Therefore it should not be difficult to discuss the implications of a transport strategy as part of the structure plan and the details of the road proposals with the relevant local plans.

Thirdly, that detailed long term transport planning as exemplified by the two-documents is necessary for a number of reasons, the main reasons being:

(i) land can be reserved, thus reducing scheme costs;

(ii) there is a need to provide for increased future traffic resulting from increased car ownership;

(iii) some exciting projects are so indivisible and expensive that they can only be undertaken on a single long span basis, e.g. Tyneside Metro.[41]

My counter arguments for the above reasons are as follows:

(i) Long term plans are normally not detailed enough to reserve land. Long term reservations only increases blight since local authorities are not obliged to purchase land if construction is not due to start for ten years. Presently most county authorities, having rejected a number of inherited road proposals, are selling land they have acquired for the construction of urban roads planned in the 60s.

(ii) Several problems are associated with future traffic predictions. These have been dealt with by a number of authors. The exercise is further complicated when applied to urban areas for reasons discussed earlier in this chapter. In any case, the significant influence of political and social factors will make this approach invalid.

(iii) Professor Peter Hall and Stephen Plowden are amongst two of several authors who argue against undertaking existing but expensive and indivis ible long-term projects.[42,43] The main problems with such projects are that serious mistakes can be made in predicting the long term costs and benefits, they can lock a number of future alternatives irreversibly, they are essentially self-fulfilling (for instance by generating their own demand) and that they are normally not justified in stages (which leads to a profitably initial stage of the scheme hiding further unjustified developments).[44]

18.4 REDUCTION OF SUPERVISION BY GOVERNMENT

The TPP/TSG system is intended to give local authorities greater freedom in planning local transport provisions. The requirement to submit TPP annually with further independent justification such as COBA assessments while structure and local plans are revised less frequently is contradictory to this intention. The need to review TPP frequently has two further disadvantages. It provides an opportunity for the engineer to ignore the structure plan as the specific vehicle dealing with communications and transport. The TPP being a document to negotiate central government grants and capital expenditure allocations tends to become the key input in the landuse-transport planning process.[45]

In the development of my recommendations, I will examine ways to suitably mesh landuse-transport planning with grant negotiations.

18.5 CONCLUSION

The TPP system is intended to fulfil the twin aims of co-ordinating policies and operating within a framework defined by the structure and local plans. Presently these aims are not fulfilled because of a number of difficulties identified in this Chapter.

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9. Ibid, pp 17-19 and 106-146

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11. Department of the Environment (5 April 1974) TRANSPORT SUPPLEMENTARY GRANT - MORE DETAILS OF THE NEW SYSTEM : CIRCULAR 27/74
London, HMSO, ANNEX C

12. Ibid, ANNEX D

13. Department of Transport (1981) COBA 9
London, Assessments Policy and Methods Division, Department of Transport, 2 Marsham Street, SW1

14. Reference for original flow charts : Ibid, Introduction, diagrams A and B

15. Ibid, Chapters 5 and 6

16. For instance a set of road-side interview surveys on all the roads crossing a cordon surrounding an urban area is normally used to gather information on terminal and through traffic. This information is sometimes checked using scree-line surveys on roads within an urban area. To gain information on internal traffic one might interview a sample of residents (home interviews) and in work places. In addition to provide input to COBA programme, one needs a comprehensive set of manual and automatic traffic counts and speed flow relationship along a number of roads.

    Typically, a small town of about 50,000 population might need £10 to £20,000 just to complete the surveys to provide a by pass.

17. COBA 9, op cit para 5.5.2

18. Leitch G (Chairman) (1977) REPORT OF THE ADVISORY COMMITTEE ON TRUNK ROAD ASSESSMENT
    London HMSO, para 24.10

19. TEC ABOUT Sept 81

20. Leitch, G, op cit. This Committee has completed a number of sensitivity tests on COBA 8, the previous version to COBA 9. For a summary of their result refer to their Report, chapter 14.

21. COBA 9, op cit, para 4.5

22. Ibid, para 3.7

23. Ibid, for instance refer to APPLICATION OF COBA contained in the INTRODUCTION TO COBA 9 MANUAL.

24. The minimum NET PRESENT VALUE (NPV) OF BENEFITS necessary to gain approval of the scheme from the Department of Transport without a special submission to the Treasury is known as the "turn key" value. At present this value is fixed at NPV = 0.

25. DEPARTMENTAL STANDARD TD 9/81. p A2

26. TRAFFIC APPRAISAL MANUAL Para 18.4.4

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39. This information was gained by conversation with a number of transportation planning officers working for various County Councils in particular Oxfordshire, Mersey side and Hertfordshire.

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CHAPTER NINETEEN

RECOMMENDATIONS FOR A NEW PLANNING METHOD

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> "On reading this paper on the problem of optional design, my first reflection was that if God has been exposed to Professor Harris's instruction, He would have postponed the creation indefinitely and applied to the Ford Foundation for a research grant."
>
> Lowry: The Urban Transportation Planning Process[1]

In the last two chapters, I identified and commented on the shortcomings of the SP-LP and the TPP systems. In the previous chapters, it was shown that to be successful, any new planning method must take cognizance of the three significant factors - party political control, pressure group resistance and chief officers' influence in that order.

The aim of this chapter is to recommend modifications to the planning system described in the previous two chapters. A brief outline (see Fig. 19.01) of a more satisfactory method of planning, essentially applicable in county and district councils which have political stability for about four years, is also given. The issues considered and suggested remedies are discussed in the rest of this chapter and summarised in Fig. 1902 (table).

19.1 DISCUSSION OF PRIMARY FEATURES OF THE SYSTEM

The regional plans unnecessarily restrict the scope of the structure plans. Also the former are not flexible enough to accommodate changes in Governments' policies (see para 17.2.1).

It is recommended that the Government should issue a set of "NATIONAL AIMS AND POLICIES" * (see footnote) as they apply to a particular county as an acceptable framework for strategic planning at the county level.

Political control of councils changes frequently. However, political consideration is the most influential factor in local government decision making. Therefore detailed, long term planning is unrealistic (note: Present practice is somewhat similar to my recommendation given below.)

It is recommended that structure and local plans should be prepared to

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* MAIN ACTIVITIES IN THE FLOW CHART (SEE FIG. 19.01) WHEN INTRODUCED IN THE TEXT ARE GIVEN IN UPPER-CASE LETTERS

RECOMMENDED OUTLINE FOR NEW PLANNING METHOD : FIGURE 19.01

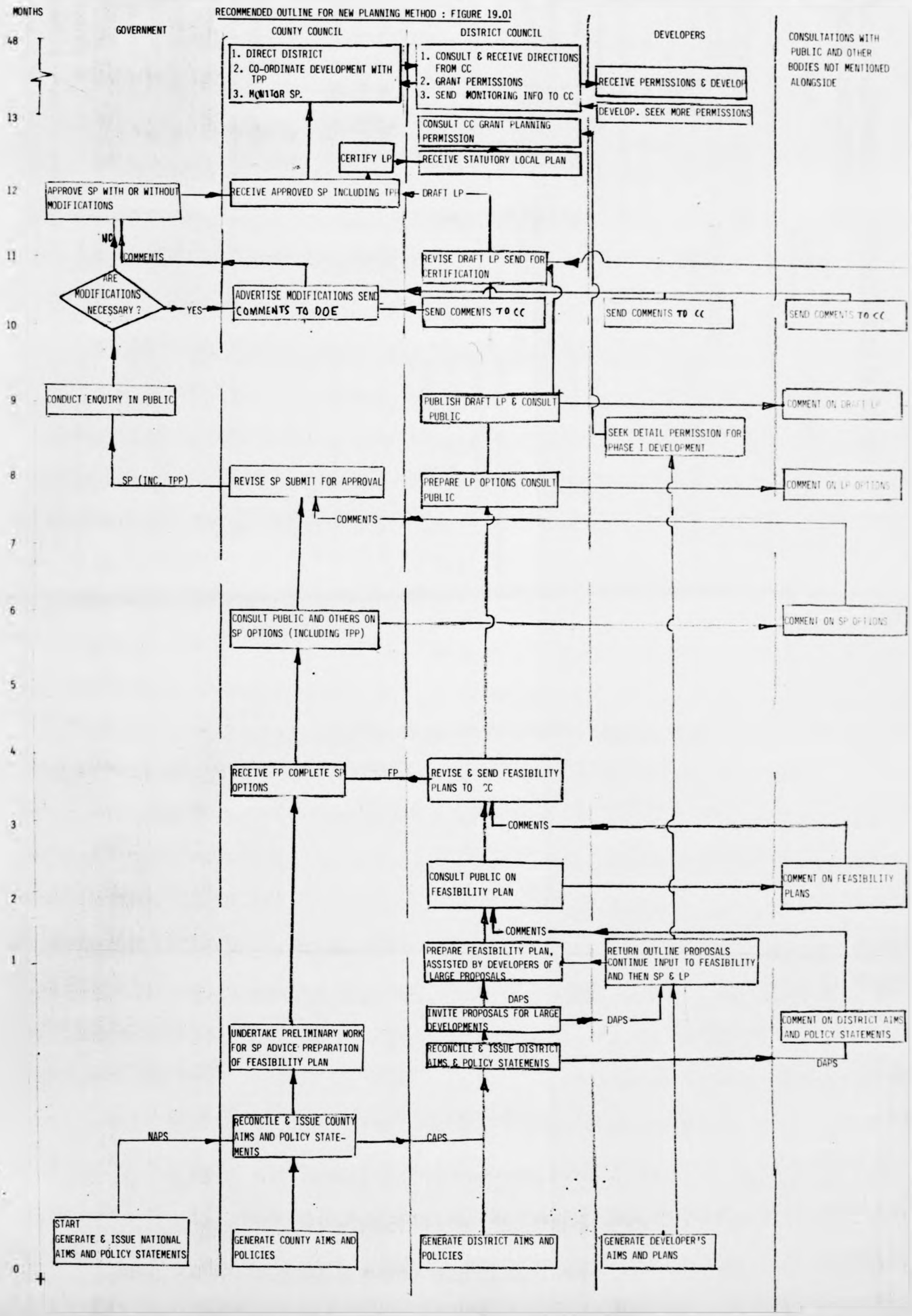

FIGURE 19.02 (Table)

LIST OF ISSUES CONSIDERED (SEE CHAPTERS 17 AND 18) AND REMEDIES RECOMMENDED IN THE PRESENT CHAPTER

ISSUE	SECTION REF where issue discussed	RECOMMENDED REMEDY
Issues Relating to Structure Plans		
Interpretation of National and Regional Policies		
1. Regional plans are not statutory not scrutinized in public and long turning-cycles for revisions result in out of date reflection of Government policies most of the time. The plans are too restrictive.	17.2.1	Replace by national aims and policy statement
Establishing Aims, Policies and General Purposes		
2. Extensive work leads to infrequent revisions of structure plans. SPs do not reflect council policy for long periods of currency.	17.2.2	Reduce work load by adopting methods recommended. In particular prepare a feasibility plan (see para 19.1)
3. Unrealistic long term, trend predictions lead to little scope for positive guidance.	17.2.2	Detailed considerations for SP should be limited to 5 years. A limited discussion of future for a further 10 years (see para 19.1).
Indicating Action Areas		
4. Restrictive requirements are now relaxed.	17.2.3	No changes recommended.
Providing Guidance Outside Local Plan Areas		
5. Development control policies for rural areas.	17.2.4	No changes recommended.
Providing Basis for Co-Ordinating Decisions		
6. Co-ordination with other internal council functions are unsatisfactory because of traditional rivalries	17.2.5	Provide structure plans to be the central medium for a number of grant negotiations with Government. E.g. include TPP as part of SP.

	ISSUE	SECTION REF	RECOMMENDED REMEDY
7.	Co-Ordination of SP with other functions of a district council is unsatisfactory.	17.2.5	Statements as basis for feasibility plans. SP to be based on feasibility plans prepared by district councils.
8.	Co-ordination with other public authorities and statutory undertakers unsatisfactory because structure plan policies are difficult to quantify.	17.2.5	Use feasibility plans in such negotiations prior to publication of structure plan.
	Bringing Main Planning Issues before Minister and Public		
9.	Structure plans are extensively modified by Government but the latter unwilling to financially commit themselves to the proposals.	17.2.6	SP should be a main vehicle for grant negotiations. This can be achieved by preparing policies and programmes reports (such as TPP) for all relevant services as part of structure planning every four years.
10.	SP consultations too vague for comments by individuals. Public consultation takes place too late for full integration at the relevant stage.	17.2.6	(a) Illustrate SP proposals by outline proposals contained in the feasibility plans. (b) Input from feasibility plan consultations available sufficiently early to take public views into consideration when preparing SP.
	Issues Relating to Local Plans		
	Applying the Strategy of the Structure Plan		
11.	Excessive work involved in plan preparation leads to infrequent revisions. Therefore plans do not reflect recent council policies.	17.3.1	Reduce workload by sharing with developers including council's housing departments.
12.	A number of difficulties exist in operating a two tier system of planning.	17.3.1	Structure plan should be based as far as possible on feasibility plans which include district policies.

FIGURE 19.02(III)

	ISSUE	SECTION REF	RECOMMENDED REMEDY
13.	Practical difficulties on implementing the structure plan, e.g. geological problems only come to light on detailed studies.	17.3.1	Feasibility plans will reduce such problems.
	Providing Detailed Basis for Development Control		
14.	Local plans do not satisfactorily consider development difficulties even when known.	17.3.2	Feasibility plans to include input from developers.
	Providing a Basis for Co-Ordinating Development		
15.	Little power exists for local authorities to co-ordinate public and private development and expenditures.	17.3.3	(a) Continuous working with developers during plan preparation will improve districts' ability to co-ordinate. (b) Commitment by councils to provide infrastructure is increased in the recommended method. This will improve co-ordination. (c) Frequent revisions coupled with automatic loss of outline permission not used at the end of a plan period will help in this respect.
16.	Bringing Local and Detailed Issues Before Public Detailed issues come to light only at local planning stage. However procedures to deal with local plan objections are unsatisfactory even when compared with old style development plans. Also council staff are too overworked during plan-preparation stage to undertake further public participation work part-time.	17.3.4	(a) Illustrations using feasibility plan proposals enhances public understanding. Such consultations begin even before structure plan preparation. (b) Workload for plan preparation is shared with developers' staff and is therefore reduced overall. This will lead to council staff having more time for public consultation.

FIGURE 19.02(IV)

ISSUE	SECTION REF	RECOMMENDED REMEDY
Issues Relating to Transport Policies and Programmes Deriving TPP From Structure Plan Policies		
17. Long turning cycle of SPs annual revision of TPP causes latter to lead the former.	18.1	(a) SP and TPP to be revised simultaneously every four years (b) TPP to be an appendix to SP
18. Trunk roads outside local control	18.1	Public consultation should include as a last resort, information on all transport projects outside the control of the local councils.
19. Excessive Government control on the detailed allocation of TPP funds	18.1	Where direct Government intervention is warranted to ensure the provision of selected services, make these statutory and show them separately in the TPP.
20. Departmental loyalties undermine corporate approach	18.1	Abolish practices that perpetutate undesirable departmental practices, e.g. transport grants should be negotiated on the basis of a combined SP-TPP rather than an annual TPP.
21. Ability of districts to undermine transport policies of county council	18.1	Opportunities increased in the recommended SP-LP-TPP system to arrive at mutually agreeable policies.
22. Councils can back-track from implementing plans without penalty. However, blight along planned routes not entirely lifted. Moreover the practice causes hardship to private developers.	18.1	(a) short term planning will help. (b) Feasibility plans, co-operation within councils and with the developers, improved public participation will all help in this respect.
23. Land-use and transport plans linked through time only, lose synchronism when progressed by separate departments.		(a) Link transport plans to bench mark events in structure and local plans. (b) Producing SP and TPP together helps.

FIGURE 19.02(V)

	ISSUE	SECTION REF	RECOMMENDED REMEDY
	Promoting Internally Co-Ordinated TPP		
24.	Major expenditure streams such as highway investment within the TPP are not internally co-ordinated.	18.2	Generally, negotiations based on subjective assessment and local data should replace assessment based on treating each expenditure stream separately. Further research should be undertaken to devise a central framework for comparing the cost and benefits in the long and short term and to provide information for discussing TPP options (see Chapter 20).
25.	Use of Marshal Maintenance Standards hinders co-ordination of inter-related transport expenditures. Premature application of standards does not help political decision making.	18.2.1	Overall maintenance needs should be discussed as part of transport provisions for defined local plan areas.
26.	Because highway investment proposals must comply with special economic and environmental standards, co-ordination of these proposals with other expenditure streams is undermined.	18.2.2	(a) COBA is shown to be invalid for urban schemes. Use a Leitch type assessment as part of the central framework for justification. (b) Highway design standards should be based more on willingness to spend capital. Design standards to determine a likely range for the level of service that might result in providing a highway scheme within a roughly predetermined budget.
27.	Road safety, traffic management and related measures do not employ any comprehensive approaches for evaluation nor for co-ordination.	18.2.3	The decision-making process should be improved by including all the information necessary as part of the framework.

FIGURE 19.02(VI)

	ISSUE	SECTION REF	RECOMMENDED REMEDY
28.	A needs approach or cost benefit approach for the evaluation of public transport revenue support measures do not lend to co-ordination with other transport measures.	18.2.4	Method used in Oxfordshire County Council satisfactory for development and inclusion in a co-ordinated framework.
	Elimination of Bias		
29.	Bias in favour of capital expenditure introduced when TPP receives its input from "Major Highways Capital Programme" or from recommendations contained in traditional transportation studies.	18.3	Abolish this practice. The recommended SP-TPP-LP system satisfactory to identify investment needs and progress the projects.
	Reduction of Supervision by Government		
30.	Requirement to submit TPP annually is contrary to reduction of supervision. This requirement also encourages preparation of TPP as a document independent of SP.	18.4	Grants should be negotiated every four years on the basis of an SP which contains TPP as an appendix.

repeat existing policies over a period of five years only. However, structure plans should look forward for a further period of about ten years. This analysis of the future should indicate the likely outcomes that might result in implementing the short term plans and identify different strategies that may be adopted for the future. For example, a structure plan might indicate that a town should increase its housing stock by 600 houses over the next five years. The future analysis will suggest the probability and estimates of long-term needs for further increases in housing stock in the town so that local planners can bear in mind this possible need when planning for the short term.

Extensive survey and prediction work associated with traditional planning makes it impracticable to undertake short-term revisions to the plans (See para 17.2.2).

The workload can be reduced and shared as follows:

(i) limit detailed planning to produce only the "five year" plan;

(ii) combine structure and local planning work wherever possible;

(iii) share the workload with prospective developers;

(iv) restrict data and processing requirements for long term structure planning (5th year to the 15th year period) to be consistent with the tentative nature of such predictions.

In the next sub section, I will describe the use of a "feasibility plan" that will help to reduce planning workload. The feasibility plan also have other advantages.

19.1.1 Preparation of Feasibility Plan

To prepare the feasibility plan, the county council expands the national aims and policies and incorporates its own "aims and policies" to produce a "COUNTY AIMS AND POLICY STATEMENT". In this statement, for instance the county council will state its policies towards road construction in order to accommodate future traffic growth.

The county council will send one of these statements to each of the district councils. The statement for each district will reflect the needs of the district as interpreted by the county council. The district council will combine its own aims and policies with the "county aims and policy statement" to form a co-ordinated "DISTRICT AIMS AND POLICY STATEMENT". This statement, for instance, will identify the local

authorities policies towards growth, indicating wherever possible the extent and nature of desired growths by location.

This approach is intended to identify and iron out, at an early stage, policy differences in operating a two tier planning system (see para 17.3.1).

If the district finds the county's aims and policies substantially unacceptable, the Secretary of State for the Environment will arbitrate between the two authorities in order to produce a "district aims and policy statement" which is binding on both councils.

The district council will invite tenders from those proposing to undertake large scale development for instance including minerals working in the district. The proposals need not be restricted to the short term, however the councils should not commit themselves to support proposals well outside their elected term of office. The "district aims and policy statement" will be issued to the developers as a guidance in the preparation of "DEVELOPMENT PROPOSALS". Proposals can also originate, for instance from the council's housing department. The approach adopted in this paragraph would reduce complaints regarding the development potential of sites identified in the local plan (see para 17.3.2).

At this stage the developers need to submit only outline proposals. They will identify the sites and describe the essential features, problems and the viability of the proposed developments. For instance, with respect to viability, the developers will justify the shopping facilities that will be available to serve proposed residential developments. On receipt of the tenders the district will compile a "FEASIBILITY PLAN".

The "feasibility plan" will include the following sections:

(i) the district aims and policy statement;

(ii) proposals recommended by the district, grouped in terms of urban settlements and their hinterland, wherever possible;

(iii) bids for large scale works and expenditures by the county. This should be identified with outline of proposals. For example, an extension to a link road identified with a development proposal. The district might propose that the county should finance the extension to complete a bypass.

(iv) tenders received and substantially incorporated in the recommended proposals.

(v) Rejected proposals with reasons for rejection.

The "STRUCTURE PLAN AND TRANSPORT POLICIES AND PROGRAMMES OPTIONS" (SP OPTIONS) to be prepared by the county council will be based essentially on the feasibility plans.

19.1.2 Preparation of SP and TPP

The proposals recommended by the "feasibility plans" are re-arranged to form groups of development proposals on a countywide basis. The intention is that each group, after negotiations and adjustments should lead to SP options, that embody strategic aims, policies and proposals acceptable to the county council. The views expressed during "PRELIMINARY CONSULTATION" should be considered at this stage. This method will provide practical propositions for the several public authorities and private groups to base their negotiations (see para 17.2.5).

In preparing options, negotiations will be initiated by the county planning department but in negotiations relating to outline planning proposals, the relevant district planning department should actively participate. These negotiations would normally involve, in addition to the planning departments' staff, representatives from the developers, other local authority departments and outside bodies such as the statutory undertakers. There will be other SP and TPP meetings where the districts should be kept informed through observers or by the minutes of the meeting. The guiding principle should be that every assistance should be given for the districts to prepare local plans that amplify the intentions of the structure plan and that negotiations for SP and TPP should be seen as setting the context for LP negotiations later. This arrangement will rectify short comings identified in para 17.3.1 - a function of the local plan is to apply the strategy of the structure plan.

A number of these SP and TPP options (SP OPTIONS) are selected now for public consultation. Also a revised county aims and policy statement" is produced that will reflect those aims and policies that are likely to be achieved in practice. The county council may recommend a particular SP OPTION to the public. The documents for public SP CONSULTATION will include the following:

(i) The revised County Aims and Policy Statement.

(ii) The SP and the related TPP options.

(iii) Development proposals that lead to the different options.

(iv) Illustration of strategic proposals using particular development proposals as examples. In using illustrations, It should be made clear that the councils are not committed to accept any of the proposals at this stage.

(v) Guide-lines for small scale or other developments not covered specifically in LP.

(vi) The various "feasibility plans". These should be readily available as separate documents for public inspection with a summary exhibited.

(vii) The basic statistics of each district and town, e.g. existing populations.

(viii) An outline budget associated with each option, apportioned by major expenditure streams to each district. For instance some typical expenditure streams may be transportation, education and council housing.

It is recommended that consideration should be given to preparing policies and programme statements for each expenditure stream of each option in a manner similar to TPP options. These should undergo public scrutiny as part of the structure plan consultation process. The approved policy and programme option for each stream including transportation (this will be the TPP) will be presented as appendices to the structure plan. However, in order to reduce confusion, I will continue to refer to this more comprehensive document as the structure plan (SP). The formal SP FOR SUBMISSION to the Central Government is prepared now by the county council. This document will take into consideration public comments and will involve further negotiations with district councils, developers and other bodies. The ENQUIRY IN PUBLIC (EIP) will be based on the submitted SP. All interested parties are given an opportunity to submit their views at the EIP. The district councils and the county council can begin their local plan preparation soon after the SP is submitted for approval.

The approved structure plan will consist of the letter of approval, the modifications by the Secretaries of State and the modified Submitted Structure Plan. The latter will cover the following sections.

(i) Introduction

(ii) Background discussion to the Plan including the nature of proposals received for development, the options considered and the reasons for selecting the particular strategy.

(iii) The Revised County Aims and Policy Statement.

(iv) The short term strategic proposals in each local plan district (or subject area) indicating likely areas for development and thoughts for the future - (A discussion on the possibilities and directions for further development as applicable in the long term should follow each short term proposal).

(v) Strategic proposals to prepare a local plan applicable to areas not covered by specific local plans. (A rural areas local plan will be prepared by each district based on these proposals.)

(vi) Putting the plan into effect -

Financial resources
Implementation
Monitoring

(vii) Key Diagram

(viii) Appendices (for instance the TPP).

19.1.3 Preparation of LP

Progress in publishing draft local plans will depend inter alia on the extent to which the district council agrees with the proposals contained in the submitted SP for the area under consideration. It is unlikely that the recommended method could lead to a district council disagreeing with proposals for a large number of local plan areas. Where the disagreement is substantial, the district should have the right to delay the LP preparation for a number of areas until the SP is approved. However, on approval of the SP, the district council will be expected to commence work on the outstanding local plans and submit them for approval by the county council within six months from the date of approval of the former plans. Failing this the county council will be expected to prepare the outstanding local plans.

The approval of the SP empowers the county council to approve local plans which together with the former become the only valid landuse plans for the area. If a county council fails to approve a local plan shortly after submission, the Secretary of State for the Environment shall "call in" the submitted local plan for arbitration. The Secretary of State should take into consideration the provisions of the approved SP. However his decision should be final and binding except in points of law when the decision may be contested in the High Court.

The local plan will include an outline of all the major proposals

approved for the area. The development will be undertaken in stages wherever possible. This should be agreed during negotiations for local plan preparation. The stages will be clearly identified in the local plan. The approval of the local plan automatically provides outline planning permissions for the identified areas. It further commits the councils to provide the infrastructure works, which stemmed from the SP and identified in the local plans as necessary for the development to proceed.

In the method described above, the local plan covers a period of about five years. It will take in excess of one year after the local elections for the district councils to publish their local plans. Until a local plan is published the previous local plan for the area will be in force. This plan will over-run into the term of the next council for a period of one to two years and will elapse soon after a new local plan is approved. The outline planning permissions given by the old plan will also elapse except for those stages where detailed permissions have been obtained. Detailed permissions will enjoy safeguards in a similar manner as at present.

19.1.4 Further Discussion on TPP

The TPP will be prepared in similar detail to the Structure Plan to cover a period of five years. It will look forward for a further period of up to ten years, as applicable, indicate the likely outcomes that might result in implementing the short term plans and recommend different strategies that may be adopted for the future.

Each group of development proposals that form a structure plan option will provide the basis for one or more TPP options. The intention is that the transport expenditure identified as necessary to promote a proposed landuse plan will form the initial input to the TPP. The transport proposals need not be necessarily local in nature. For instance, if a structure plan option is to form dispersed residential developments supported by employment and commercial development in a large county town then it may be necessary to improve the transport infrastructure leading into the town.

INTERNAL CO-ORDINATION of expenditure streams is achieved by considering problems step wise from projects of national importance down to problems associated with urban settlements. A number of options are drawn up to solve existing and anticipated short term problems by

different methods but using a co-ordinated approach. Long term problems may be identified and taken into consideration but should not dictate the outcome to short term problems.

ELIMINATION OF BIAS towards different terms of expenditure is encouraged by this approach because of the following two reasons. Firstly, discussions in public will provide different approaches to solve the problems of an area. Secondly, when consideration is given to solve problems which are internally co-ordinated by areas, this will produce professional groups who will think in terms of solving landuse transportation problems. This is different from the present approach where professionals are compartmentalised into specialist streams solving a problem in a given manner, e.g. one stream solving traffic problems by highway construction and the next by traffic management. Presently, minimum consideration is given to generate intermediate solutions.

TO REDUCE THE DEGREE OF SUPERVISION it is reasonable that the Government should take measures to -

(i) safeguard the standards associated with certain provisions;
(ii) make the local councils more accountable to the local community.

Standards are maintained at present by several means. For example by issuing departmental standards and circulars. The following additional recommendation is made in order to reflect national priorities in local transport provisions. When the Government wants certain minimum levels of expenditure to be maintained it should do so by specifying the need directly. This direct approach will help to reduce confusion in local decision making. Also the exclusion of statutory expenditures from the overall transporg budget will help the public appreciate the level of flexibility available in local decision making.

19.2 CONCLUSION

The structure and local plans should cover a period of five years with the former dealing with likely outcomes for a further period of ten years. Structure planning work should be based on feasibility studies undertaken in conjunction with district councils and major developers. This approach would amongst other things produce realistic proposals, reduce tension in operating a two tier planning system and enhance consultation with public and other authorities.

The Transport policies and programmes (TPP) should be prepared as part of the SP to cover a similar period. Programmes in the same manner should also be prepared for other expenditure streams. These programmes should undergo public consultation and should form appendices to the SP.

CHAPTER TWENTY

RECOMMENDATIONS FOR FURTHER RESEARCH

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20.1 DETAILED STUDIES FOR APPLYING THE RECOMMENDED METHOD

20.2 APPLICATION TO OVERSEAS COUNTRIES

20.3 CONCLUSION

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In this research local political discontinuity, pressure group resistance and lack of continuity of chief engineers were identified to be the important factors that resulted in low implementation of plans. In Chapter 19, I recommended a new planning methodology that is more likely to be in phase with political changes in local councils. Provisions were also made for increased public participation. Following detailed studies need to be undertaken before the recommended method can be applied in practice.

20.1 DETAILED STUDIES FOR APPLYING THE RECOMMENDED METHOD

1. At present, local authorities adopt an annual budgetory cycle. The implications by basing the financial negotiations with the Government on a structure plan published every four years or so need to be examined.

2. A procedure whereby different sets of proposals covering a specific area are presented and discussed in public may be satisfactory to improve co-ordination and public participation. However, such an approach will not be appropriate for determining national priorities between projects, for instance to determine the relative importance of two local road schemes from different partsof the country. How can this problem be overcome other than by promulgation of expenditure norms as at present?

20.2 APPLICATION TO OVERSEAS COUNTRIES

Traditional planning methods that were rejected in the United States and Europe are now being applied with greater vigour in developing countries. These countries with their very rapid urban growth need an effective transport planning process. The methods now being imported from developed countries are expensive to apply, yet there is little evidence that the problems that were identified in this thesis do not also affect traditional plans in developing countries. For instance, planning proposals for developing countries should reflect the availability of capital and professional resources for implementing the plans. Also terms of office of provincial and central government in developing countries do not normally extend for periods in excess of about five years. This should be a criteria in setting planning horizons in these countries.

20.3 CONCLUSION

Further research should be undertaken -

(i) on the detailed application of the planning method recommended in chapter nineteen;

(ii) to identify factors that influence plan implementation in developing countries and to recommend planning methods.

PLAN DETAILS AND CALCULATIONS FOR FMR AND FMQ FOR THE FOLLOWING PLANS ARE CONTAINED IN THIS APPENDIX ONE

1. MERSEYSIDE AREA LANDUSE TRANSPORTATION STUDY
2. TYNE WEAR PLAN
3. ST. HELENS TRAFFIC AND TRANSPORT PLAN
4. COVENTRY TRANSPORTATION STUDY : PHASE I
5. SOUTHAMPTON OUTLINE TRANSPORTATION PLAN
6. TEESSIDE SURVEY AND PLAN
7. PORTSMOUTH FUTURE ROAD PATTERN
8. NOTTINGHAM PRIMARY HIGHWAY NETWORK
9. CAMBRIDGE TRANSPORTATION PLAN
10. LEICESTER TRAFFIC PLAN
11. OXFORD CENTRAL AREA STUDY
12. ABINGDON ENVIRONMENT AND TRANSPORT STUDY
13. BATH : A PLANNING AND TRANSPORT STUDY
14. SLOUGH TRANSPORTATION STUDY
15. HERTFORD WARE AND HODDESDON TRANSPORTATION STUDY
16. HITCHIN LETCHWORTH BALDOCK TRANSPORTATION STUDY
17. DIDCOT ABINGDON WANTAGE TRANSPORTATION STUDY
18. SELNEC HIGHWAY PLAN DETAILS ARE CONTAINED IN SECTION 5.7 OF THIS THESIS.

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MERSEYSIDE AREA LANDUSE-TRANSPORTATION STUDY

DETAILS OF RECOMMENDED SCHEMES AND BUDGETED PHASING

NON-TRUNK ROADS - 1966 PRICE BASIS £ MILLIONS

SCHEME NO	SCHEME DESCRIPTION	1966 to 1967	1970 to 1971	1972 to 1973	1974 to 1975
	LIVERPOOL				
1	Outer Ring Road - A59 to A580	3.88			
6	A5058 Queens Drive/Rice Lane Flyover - dual 2-lane	1.10			
7	Lower House Lane/dwerry House Lane - Improvement - East Lancashire Road to Muirhead Avenue	0.10			
8	Rocky Lane/West Derby Road Improvement - Shiel Road to Muirhead Avenue	1.40			
9	A59 - Scotland Road - Improvement to dual 3-lane motorway - Queensway Tunnel to Wallasey Tunnel	0.80			
10	Tunnel Relief Flyovers - Islington to City Centre	1.80			
11	Roe Street/Hood Street/Line Street Improvement	0.40			
12	A5040 Aigburth Road Improvement - Aigburth Vale to Ullet Road	0.40			
13	A5040 Aigburth Road Improvement - St Mary's Road to Mersey Road	1.10			
14	Kingsway Tunnel - First Tube	15.20			
31	Inner Ring Road - Northern Leg - Stage I		6.00	2.00	
32	Inner Ring Road - Northern Leg - Stage II			2.00	2.00
33	Islington Radial - Inner Ring Road to North-South Primary			4.60	
34	Great Homer Street/St Anne Street Improvement Kirkdale Road to Islington			0.80	
35	Low Hill Improvement - Islington to Upper Parliament Street			0.90	
36	Kingsway Tunnel - Second Tube		5.00	2.50	
37	Scotland Road Motorway- Wallasey Tunnel to East Lancashire Road Extension				2.00
38	East Lancashire Road Extension				1.00

156	Inner Ring Road - Water Front Leg			2.00	
	Gt Howard St to South Lancs Motorway				
48	Outer Ring Road - A57 to South Lancs				
	Motorway		2.90		
47	Outer Ring Road - A57 to A580		3.80		
50	Garston Bypass		0.70	0.80	
	BUDGETED PHASING	23.20	17.01	18.17	5.80
	CUMULATIVE TOTAL NON TRUNK ROAD SCHEMES	23.20	40.21	58.38	61.16

MERSEYSIDE AREA LAND USE TRANSPORTATION STUDY

DETAILS OF RECOMMENDED SCHEMES AND EXPENDITURE PHASING

NON TRUNK ROADS - 1966 PRICE BASIS £ MILLIONS

SCHEME NO	SCHEME DESCRIPTION	1966 to 1969	1970 to 1971	1972 to 1973	1974 to 1975
15	BIRKENHEAD				
15	A552 Borough Road Improvement - Nelson St to Whetstone Lane	0.20			
20	A553 Bidston Bypass and Wallasey Spur from A552 to Mid-Wirral Motorway	1.50			
21	Birkenhead Tunnel Approach Roads	3.50			
22	Rockferry Bypass - New Ferry Bypass to A41	0.90			
	CUMULATIVE TOTAL, NON TRUNK ROADS	6.10	6.10	6.10	6.10
	CHESHIRE				
2	Hooton Industrial Road - Mid Wirral Motorway to Study Boundary	0.60			
	CUMULATIVE TOTAL - NON TRUNK ROADS	0.60	0.60	0.60	0.60
	LANCASHIRE				
3	Prescot Bypass - A57 to A58	0.60			
49	Bootle-Thornton Diversion (Lancashire Section)			1.25	
	CUMULATIVE TOTAL - NON TRUNK ROADS	0.60	0.60	1.85	1.85
	WALLASEY				
16/18	Motorway Access - Docks Link & Bayswater Rd Link	2.60			
17	A5088 Poulton Bridge Road Improvement - Beck Road to Dock Road	0.03			
19	A551 Leasowe Road Improvement - Pasture Road to Wallasey Village	0.20			
20	A553 Bidston Bypass & Wallasey Spur - A552 to Mid Wirral Motorway	1.50			
	CUMULATIVE TOTAL - NON TRUNK ROADS	4.33	4.33	4.33	4.33
	BOOTLE				
4	A565 Rimrose Rd - Rimrose Bridge to Balliol Rd	2.00			
5	A5058 Balliol Rd Improvement Derby Rd to A A5057	0.30			
49	Bootle-Thornton Diversion (Bootle Section)			1.25	
	CUMULATIVE TOTAL - NON TRUNK ROADS	2.30	2.30	3.55	3.55
	CUMULATIVE TOTAL - MALTS NON TRUNK ROADS	38.51	56.82	74.81	80.61

MERSEYSIDE AREA LAND USE TRANSPORTATION STUDY

DETAILS OF RECOMMENDED SCHEMES AND EXPENDITURE PHASING

NON TRUNK ROADS 1966 PRICE BASE £ MILLIONS

SCHEME NO	SCHEME DESCRIPTION	1966 to 1967	1970 to 1971	1972 to 1973	1974 to 1975
	TRUNK ROADS				
23	A59 Warbreck Moor Improvement Park Lane to A567	0.40			
24	South Lancashire Motorway - Outer Ring Road to Queen's Drive	7.00			
25	Moreton Spur - Mid Wirral Motorway to Moreton Road	0.30			
26	Mid-Wirral Motorway - Study Boundary to Wallasey Tunnel	12.20			
	The construction of the following schemes 27 to 30 are assumed to take place evenly distributed between 1970 to 1991				
27	Liverpool - Preston Motorway - Outer Ring Road to Study Boundary				
28	A565 Crosby Road Improvement A5036 to South Road				
29	Dock Road - A565 to A567				
30	A567 Church Road Improvement B5422 to Boundary Road				
	Total Cost of £5.26 million equally spread over 22 years		0.48	0.48	0.48
	CUMULATIVE TOTAL - TRUNK ROADS	19.90	20.38	20.86	21.34
	PUBLIC TRANSPORT				
	City Centre Rail Links		3.20	5.50	
	Electrification and Station Improvements			2.00	
	CUMULATIVE TOTAL - PUBLIC TRANSPORT SCHEMES	0	3.20	10.70	10.70

FIGURE

MERSEYSIDE AREA LANDUSE-TRANSPORTATION STUDY

DETAILS OF SCHEMES COMPLETED AND ANNUAL OUT-TURN OF EXPENDITURE

NON-TRUNK ROADS : EXPENDITURE IN 1966 PRICE BASIS £ MILLIONS

SCHEME NO.	SCHEME DESCRIPTION	1966 to 1967	1968 to 1969	1970 to 1971	1972 to 1973	1974 to 1975
	LIVERPOOL					
6	A5058 Queen's Drive/Rice Lane Fly Over	0.44	0.44	0.22		
10	Tunnel Relief Flyovers-Queen's Way Tunnel	0.28	0.56	0.27		
34	Gt Homer St/St Anne St - Improved arterial from Kirkdale Road to Islington	0.38	0.38			
8	A5049 Rocky Lane/West Derby Road improvement from Shiel Road to Muirhead Avenue	0.37	0.37	0.37		
14	Kingsway Tunnel - First Tube	2.35	5.07	5.07	2.53	
11	Roe Street/Hood Street/Lime Street improved arterials			0.20	0.20	
12/13	A5040 Aigburth Road-Ullet Road to Serpentine			0.25	0.25	
1	M57 Liverpool Outer Ring Road - A59 to A580			1.94	1.94	
47/48 & 61	M57 Liverpool Outer Ring Road A580 to A57 Stage II, A57 to South Lancashire motorway: Stage III, & Huyton Link			2.49	4.97	
36	Kingsway Tunnel - Second Tube		1.50	3.00	3.00	
38	East Lancashire Road Extension				1.00	
	OUT-TURN EXPENDITURE ON RECOMMENDED SCHEMES	4.00	8.32	13.81	13.89	0.00
	CUMULATIVE EXPENDITURE	4.00	12.32	26.13	40.02	40.02
	BIRKENHEAD					
21	Birkenhead Tunnel Approach Roads	2.04	1.02			
15	A552 Borough Road Dualling from Nelson Street to Wheatstone Lane			0.10	0.10	
20	A553 Bidston Bypass - A552 to Mid-Wirral Motorway			0.14	0.26	0.26
22	Rock Ferry Bypass - New Ferry Bypass To A41				0.38	0.39
	OUT-TURN EXPENDITURE ON RECOMMENDED SCHEMES	2.04	1.02	0.24	0.74	0.65
	CUMULATIVE EXPENDITURE	2.04	3.06	3.30	4.04	4.69
	CHESHIRE					
2	Hooton Industrial Road - Mid Wirral Motorway to Study Boundary	0.60				
	OUT-TURN EXPENDITURE	0.60				
	CUMULATIVE EXPENDITURE	0.60	0.60	0.60	0.60	0.60

MERSEYSIDE AREA LAND-USE TRANSPORTATION STUDY

DETAILS OF SCHEMES COMPLETED AND ANNUAL OUT TURN EXPENDITURE

NON-TRUNK ROADS: EXPENDITURE IN 1966 PRICE BASIS £ MILLIONS

SCHEME NO	SCHEME DESCRIPTION	1966 to 1967	1968 to 1969	1970 to 1971	1972 to 1973	1974 to 1975
	LANCASHIRE					
3	Prescot Bypass - A57 to A58	0.14	0.29	0.15		
60	B5192 Improvement-Maughall Lane to Hall Lane	0.40				
109	Delph Lane improvement - Outer Ring Road to East Lancashire Road	0.04	0.09			
	OUT-TURN EXPENDITURE ON RECOMMENDED SCHEMES	0.58	0.38	0.15	-	-
	CUMULATIVE EXPENDITURE	0.58	0.96	1.11	1.11	1.11
	WALLASEY					
18	Mid-Wirral Motorway Access Roads - Docks Link & Bays Water Road Link	-	0.89	0.89	0.44	
	OUT-TURN EXPENDITURE ON RECOMMENDED SCHEMES	0	0.89	0.89	0.44	0
	CUMULATIVE EXPENDITURE	0	0.89	1.78	2.22	2.22
	BOOTLE					
4/5	A565 Rimrose Road widening from Rimrose Bridge to Balliol Road			0.20	0.88	
	OUT-TURN EXPENDITURE ON RECOMMENDED SCHEMES	0	0	0.20	0.88	0
	CUMULATIVE EXPENDITURE	0	0	0.20	1.08	1.92
	MALTS AREA					
	CUMULATIVE EXPENDITURE ON RECOMMENDED NON-TRUNK ROADS	7.63	17.88	30.76	44.61	48.12
	TRUNK ROADS					
23	A59 Warbreck Moor Improvement-From Park Lane to A567	0.40				
25/26	Mid Wirral Motorway & Moreton Spur		3.13	6.25	3.12	
24	South Lancashire Motorway-Outer Ring Road to Queens Drive					7.00
28	A565 Crosby Road Improvement - From A5036 to South Road					0.36
	CUMULATIVE EXPENDITURE ON RECOMMENDED TRUNK ROADS	0.40	3.53	9.78	12.90	20.26

PUBLIC TRANSPORT		
Hamilton Square Burrowing Junction		
Terminal Loop and Exchange - Central		
Scheme	5.2	5.5
CUMULATIVE EXPENDITURE ON RECOMMENDED		
PUBLIC TRANSPORT SCHEMES	5.2	10.7

MERSEYSIDE AREA LANDUSE TRANSPORTATION STUDY

DETAILS OF SCHEMES COMPLETED OUTSIDE THE PLAN

1966 PRICE BASIS £ MILLIONS

	SCHEME DESCRIPTION	EXPENDITURE PHASING 1966 to 1976	1968 to 1969	1970 to 1971	1972 to 1973	1974 to 1975
	LIVERPOOL - NON TRUNK ROADS					
1	B5192-Longmoor Lane Improvement	0.12				
2	Bowering Park Railway Bridge Improvement	0.10	0.04			
3	A59 - Second Tunnel Approach Roads		0.34	0.34	0.16	
4	Roe Street/Hood Street Gyratory Scheme		1.63			
	CUMULATIVE TOTAL OF SCHEMES OUTSIDE PLAN RECOMMENDATIONS	0.22	2.23	2.57	2.73	2.73
	MALTS - TRUNK ROAD					
5	A5036 Litherland Lift Bridge Diversion				0.85	0.85
	CALCULATION OF FMR & FMQ : NON TRUNK					
	LIVERPOOL					
	Cumulative expenditure planned	4.00	12.32	26.13	40.02	40.02
	Recommended phasing cumulative FMR	0.34	0.53	0.65	0.69	0.65
	Cumulative Expenditure - Planned + outside plan	3.89	12.99	23.94	33.12	38.04
	FMQ	0.94	0.83	0.89	0.92	0.93
	BIRKENHEAD					
	Cumulative Expenditure Planned	2.04	3.06	3.30	4.04	4.69
	Recommended phasing - cumulative	6.10	6.10	6.10	6.10	6.10
	FMR	0.33	0.50	0.54	0.66	0.77
	FMQ = 1.00					
	CHESHIRE					
	Cumulative Expenditure - Planned	0.60	0.60	0.60	0.60	0.60
	Recommended phasing - cumulative	0.60	0.60	0.60	0.60	0.60
	FMR = 1.00 FMQ = 1.00					
	LANCASHIRE					
	Cumulative expenditure - planned	0.58	0.96	1.11	1.11	1.11
	Recommended Phasing - Cumulative	0.60	0.60	1.85	1.85	1.85
	FMR	0.97	1.60	0.60	0.60	0.60
	Cumulative Expenditure planned+ outside	0.58	0.96	1.11	1.96	1.96
	FMQ	1.00	1.00	1.00	0.57	0.57

MERSEYSIDE AREA LAND USE TRANSPORTATION STUDY

CALCULATION OF FMR & FMQ

COSTS IN £ MILLIONS - 1966 PRICE BASIS

NON-TRUNK ROADS (CTD)

	1966 to 1967	1968 to 1969	1970 to 1971	1972 to 1973	1974 to 1975
WALLASEY					
Cumulative Expenditure - Planned	0	0.89	1.78	2.72	2.22
Recommended Phasing - Cumulative	4.33	4.33	4.33	4.33	4.33
FMR					
FMQ = 1.00	0	0.21	0.41	0.51	0.51
BOOTLE					
Cumulative Expenditure - Planned	0	0	0.20	1.08	1.08
Recommended Phasing - Cumulative	1.15	2.30		3.55	3.55
FMR	0	0	0.09	0.30	0.30
MALTS AREA - NON TRUNK ROADS					
Cumulative Expenditure - Planned	7.22	17.83	33.12	49.07	49.72
Recommended Phasing - Cumulative	19.25	38.51	56.82	74.81	80.61
FMR	0.40	0.46	0.54	0.56	0.60
Cumulative Expenditure Planned + outside	7.85	20.11	33.33	44.34	50.85
FMQ	0.97	0.89	0.92	0.94	0.95
CALCULATION OF FMR & FMQ - TRUNK ROADS					
Cumulative expenditure - Planned	0.40	3.53	9.78	12.90	20.26
Recommended Phasing - Cumulative	9.95	19.80	20.38	20.86	21.34
FMR	0.04	0.17	0.48	0.62	0.95
Cumulative ExpenditurePlanned + outside	0.40	3.53	9.78	13.75	21.96
FMQ	1.00	1.00	1.00	0.94	0.92
CALCULATION OF FMR & FMQ - PUBLIC TRANSPORT					
Cumulative Expenditure - Planned	0	0	0	5.2	10.70
Recommended Phasing - Cumulative	0	3.20	10.70	10.70	10.70
FMR	0	0	0	0.49	1.00
FMQ = 1.00					

TYNE WEAR PLAN

DETAILS OF RECOMMENDED SCHEMES AND PHASING OF BUDGETED EXPENDITURE NON-TRUNK ROADS. EXPENDITURE IN 1969 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1970 TO 1971	1972 TO 1973	1974 TO 1975	1976 TO 1977
	NORTHUMBERLAND COUNTY				
8.	Hadrian Road to Bewicke Street Improvement, Walsend	0.44			
9.	A186 Holystone to Earsdon	0.36	0.36		
10.	A191 Benton/Four Lane End Intersection			0.62	0.62
11.	A191 Benton Quarry to Holystone Improvement	0.18	0.36	0.18	
17.	A188 Benton Lane Duplication			0.18	0.18
22.	A695 Prudhoe Bypass			0.36	0.36
	CUMULATIVE BUDGET - RECOMMENDED	0.98	1.70	3.04	4.20
	DURHAM COUNTY				
47.	Washington New Town Roads	0.90	0.90	0.90	0.90
54.	A694 Improvement - Rowlands Gill to Dipwood Village	0.14	0.14		
56.	A185 Albert Road, Jarrow level Crossing	0.18	0.18		
59.	A693 Improvement - Pelton Link to Chester-le-Street	0.48	0.48		
61.	A693 Improvement through Stanley	0.34	0.34		
52.	A695 Blaydon to New Scotswood Bridge	1.05	1.05		
53.	A695 Blaydon Extension West of Stella			0.25	0.25
55.	A692 Wickham Highway Improvement - High Marley Hill			0.68	0.68
62.	A6127 Chester-le-Street By-pass: Stage I			0.46	0.46
48.	Gateshead Western Bypass - Durham County Section	2.65	2.65		
	CUMULATIVE BUDGET - RECOMMENDED	5.74	11.48	13.77	16.06

TYNE WEAR PLAN

DETAILS OF RECOMMENDED SCHEMES AND PHASING OF BUDGETED EXPENDITURE NON-TRUNK ROADS. EXPENDITURE IN 1969 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1970 TO 1971	1972 TO 1973	1974 TO 1975	1976 TO 1977
	NEWCASTLE UPON TYNE				
70. & 71.	A1058 Improvement - Jesmond Road to Stephenson Road	3.46	1.21		
72.	Central Motorway East	5.30	5.30		
73.	Claremont Road Improvement	0.38	0.38		
74.	A695 - Shields Road Motorway - Stage I	0.75	0.75		
75.	A695 - Shields Road Motorway - Stage II			0.88	0.87
76.	East-West Motorway			4.50	4.50
	CUMULATIVE BUDGET - RECOMMENDED	9.89	17.53	22.91	28.23
	GATESHEAD				
84.	Gateshead Western Bypass - Gateshead Section	1.00	1.00		
79.	A692 Charles Street Improvement	0.04	0.04		
80.	A6082 Redheugh Bridge and approaches	0.88	0.88		
81.	West Central Route - Stage I	0.41	0.41		
82.	A6083 - East/West Route - Stage I	0.58	0.58		
85.	Consett Route - Western By-pass to Redheugh Bridge	1.20	1.20		
83.	A1 Low Fell Bypass			0.70	0.70
	CUMULATIVE BUDGET - RECOMMENDED	4.11	8.22	8.92	9.62

TYNE WEAR PLAN

DETAILS OF RECOMMENDED SCHEMES AND PHASING OF BUDGETED EXPENDITURE NON-TRUNK ROADS. EXPENDITURE IN 1969 PRICE BASIS (£ MILLIONS)

SCHEME	SCHEME DESCRIPTION	1970 TO 1971	1972 TO 1973	1974 TO 1975	1976 TO 1977
	SUNDERLAND				
88.	Washington (Northern) Cross Route - Phase 1	0.38	0.37		
89.	A183 Chester Road Widening - Springwell Road to Borough Boundary	0.10	0.10		
100.	Trimdon Street/Silksworth Row Improvement	0.10	0.10		
108.	A183 - Inner Ring Road - Stage II	0.88	0.87		
110.	A690 - Durham Road Widening Vine Place to Royalty	0.19	0.19		
95.	Queen Alexandra Bridge and Approaches			0.78	0.78
109.	A183 Inner Ring Road - Stage 3			0.62	0.63
111.	A690 New Wear Bridge and Approaches		0.56	2.04	2.04
	CUMULATIVE BUDGET - RECOMMENDED	1.65	3.86	7.30	10.75
	TYNEMOUTH				
121.	A191 New York Road Improvement	0.20	0.20		
122.	A695 Albion Road Improvement - Stage I	0.12	0.12		
123.	A695 Albion Road Improvement - Stage II	0.12	0.12		
124.	A695 Albion Road Improvement - Stage III		0.18	0.18	
130.	A1058 Duplication of Beach Road - Billy Mill to Preston Road			0.42	0.43
	CUMULATIVE BUDGET - RECOMMENDED	0.44	1.06	1.66	2.09

TYNE WEAR

DETAILS OF RECOMMENDED SCHEMES AND PHASING OF BUDGETED EXPENDITURE NON-TRUNK ROADS. EXPENDITURE IN 1969 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1970 TO 1971	1972 TO 1973	1974 TO 1975	1976 TO 1977
	SOUTHSHIELDS				
134.	A1055 Improvement - Western Approach Jarrow Road and Arches	0.35	0.35		
135.	A1055 Western Approach from existing dual carriageway to Jarrow Road	0.19	0.19		
136.	Central Area Through Road Stage 3	0.11	0.12		
137.	A185 Western Approach - Arches to West Way	0.35	0.35		
138.	A185 Western Approach - West Way to Alice Street			0.08	0.07
139.	A185 Western Approach - Alice Street Improvement			0.07	0.08
140.	A19 Sunderland Road Improvement Hepscott Terrace to Westoe Road			0.08	0.07
	CUMULATIVE BUDGET - RECOMMENDED	1.00	2.00	2.23	2.45
	TYNE WEAR AREA: RECOMMENDED BUDGET - CUMULATIVE	23.91	45.87	59.67	73.29
	TRUNK ROADS				
32.	A69 - Throckley, Heddon, Horsley Bypass	2.50	2.50		
51.	A1 - Improvement: North of Birtley Bypass - Improvement	0.47	0.47		
33.	A1 Gosforth Bypass			1.34	1.35
	TRUNK ROADS	2.97	5.94	7.28	8.63

TYNE WEAR

DETAILS OF RECOMMENDED SCHEMES AND PHASING OF BUDGETED EXPENDITURE NON-TRUNK ROADS. EXPENDITURE IN 1969 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1970 TO 1971	1972 TO 1973	1974 TO 1975	1976 TO 1977
	SOUTHSHIELDS				
134.	A1055 Improvement - Western Approach Jarrow Road and Arches	0.35	0.35		
135.	A1055 Western Approach from existing dual carriageway to Jarrow Road	0.19	0.19		
136.	Central Area Through Road Stage 3	0.11	0.12		
137.	A185 Western Approach - Arches to West Way	0.35	0.35		
138.	A185 Western Approach - West Way to Alice Street			0.08	0.07
139.	A185 Western Approach - Alice Street Improvement			0.07	0.08
140.	A19 Sunderland Road Improvement Hepscott Terrace to Westoe Road			0.08	0.07
	CUMULATIVE BUDGET - RECOMMENDED	1.00	2.00	2.23	2.45
	TYNE WEAR AREA: RECOMMENDED BUDGET - CUMULATIVE	23.91	45.87	59.67	73.29
	TRUNK ROADS				
32.	A69 - Throckley, Heddon, Horsley Bypass	2.50	2.50		
51.	A1 - Improvement: North of Birtley Bypass - Improvement	0.47	0.47		
33.	A1 Gosforth Bypass			1.34	1.35
	TRUNK ROADS	2.97	5.94	7.28	8.63

TYNE WEAR PLAN

DETAILS OF SCHEMES COMPLETED AND ANNUAL OUT-TURN OF EXPENDITURE

NON-TRUNK ROADS EXPENDITURE IN 1969 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1970 TO 1971	1972 TO 1973	1974 TO 1975	1976 TO 1977
	NORTHUMBERLAND COUNTY				
8.	Hadrian Road to Bewicke Street Improvement, Walsend	0.29	0.15		
	CUMULATIVE EXPENDITURE WITHIN PLAN	0.29	0.44	0.44	0.44
	DURHAM COUNTY				
54.	A694 Rowlands Gill to Dipwood Village Improvement	0.16	0.09		
48.	A613 Gateshead Western Bypass - Durham County Section	1.06	2.12	2.13	
52.	A695 Blaydon to New Scotswood Bridge Improvement			0.82	0.79
47.	Washington New Town Roads	0.98	0.98	1.01	0.62
	ANNUAL OUT-TURN EXPENDITURE ON RECOMMENDED SCHEMES	2.20	3.19	3.96	1.41
	CUMULATIVE EXPENDITURE WITHIN PLAN	2.20	5.39	9.35	10.76
	A693 Stanley Town Centre By-Pass - Expenditure outside plan	0.31	0.31		
	CUMULATIVE EXPENDITURE WITHIN AND OUTSIDE PLAN - DURHAM	2.51	6.01	9.97	11.38
	NEWCASTLE UPON TYNE				
72.	A1 (A6127) Central Motorway East	0	3.88	2.92	0.64
	CUMULATIVE EXPENDITURE WITHIN PLAN	0	3.88	6.80	7.44
	North West Radial Route - Stage II - expenditure outside plan			0.35	0.17
	CUMULATIVE EXPENDITURE WITHIN AND OUTSIDE PLAN - NEWCASTLE	0	3.88	7.15	7.96

TYNE WEAR PLAN

DETAILS OF SCHEMES COMPLETED AND ANNUAL OUT-TURN OF EXPENDITURE

NON-TRUNK ROADS EXPENDITURE IN 1969 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1970 TO 1971	1972 TO 1973	1974 TO 1975	1976 TO 1977
	GATESHEAD				
84.	A613 Gateshead Western Bypass - Gateshead Section	0.40	0.80	0.80	
81.	West Central Route - Stage 1	0.16	0.32	0.32	
85.	Consett Route - Western Bypass to Redheugh Bridge			2.00	
80.	Redheugh Bridge and approaches		0.31	0.61	
	CUMULATIVE EXPENDITURE WITHIN PLAN	0.56	1.99	5.72	5.72
	SUNDERLAND				
88.	B1289 Washington (Northern) Cross Route Phase 1	0.42			
100.	Trimdon Street/Silksworth Row Improvement	0.20			
110.	A690 Durham Road Widening - Vine Place to Royalty	0.04	0.09	0.04	
	CUMULATIVE EXPENDITURE WITHIN PLAN	0.66	0.75	0.79	0.79
	TYNEMOUTH				
121.	New York Road/Improvement	0.39			
	CUMULATIVE EXPENDITURE WITHIN PLAN	0.39	0.39	0.39	0.39
	NON-TRUNK ROADS: TYNE WEAR AREA				
	CUMULATIVE EXPENDITURE WITHIN PLAN	4.18	14.38	23.97	26.02
	CUMULATIVE EXPENDITURE WITHIN AND OUTSIDE PLAN	4.49	15.00	24.94	27.16
	TRUNK ROADS - DETAILS OF SCHEMES COMPLETED				
51.	A1 Improvement - North of Birtley Bypass	0.86			
32.	A69 Throckley, Hedden, Horsley By-Pass		1.17	2.35	
	CUMULATIVE EXPENDITURE WITHIN PLAN	0.86	2.03	4.38	4.38

TYNE WEAR PLAN

CALCULATION OF FMR & FMQ: EXPENDITURE IN 1969 PRICE BASIS (£ MILLIONS)

NON-TRUNK ROADS

		1970 TO 1971	1972 TO 1973	1974 TO 1975	1976 TO 1977
	NORTHUMBERLAND COUNTY				
1.	CUMULATIVE EXPENDITURE WITHIN PLAN	0.29	0.44	0.44	0.44
2.	CUMULATIVE BUDGET RECOMMENDED	0.98	1.70	3.04	4.20
	FMR	0.30	0.26	0.15	0.10
	FMQ = 1.00				
	DURHAM COUNTY				
1.	CUMULATIVE EXPENDITURE WITHIN PLAN	2.20	5.39	9.35	10.76
2.	CUMULATIVE BUDGET RECOMMENDED	5.74	11.48	13.77	16.06
	FMR	0.38	0.47	0.68	0.67
3.	CUMULATIVE EXPENDITURE WITHIN AND OUTSIDE PLAN	2.51	6.01	9.97	11.38
	FMQ	0.88	0.90	0.94	0.95
	NEWCASTLE UPON TYNE				
1.	CUMULATIVE EXPENDITURE WITHIN PLAN	0	3.88	6.80	7.44
2.	CUMULATIVE BUDGET RECOMMENDED	9.89	17.53	22.91	28.28
	FMR	0	0.22	0.30	0.26
3.	CUMULATIVE EXPENDITURE WITHIN AND OUTSIDE PLAN	0	3.88	7.15	7.96
	FMQ	1.00	1.00	0.95	0.94
	GATESHEAD				
1.	CUMULATIVE EXPENDITURE WITHIN PLAN	0.56	1.99	5.72	5.72
2.	CUMULATIVE BUDGET RECOMMENDED	4.11	8.22	8.92	9.62
	FMR	0.14	0.24	0.64	0.59
	SUNDERLAND				
1.	CUMULATIVE EXPENDITURE WITHIN PLAN	0.66	0.75	0.79	0.79
2.	CUMULATIVE BUDGET RECOMMENDED	1.65	3.86	7.30	10.75
	FMR	0.40	0.19	0.11	0.07

TYNE WEAR PLAN

CALCULATION OF FMR & FM4: EXPENDITURE IN 1969 PRICE BASIS (£ MILLION)

NON-TRUNK ROAD

		1970 TO 1971	1972 TO 1973	1974 TO 1975	1976 TO 1977
	TYNEMOUTH				
1.	CUMULATIVE EXPENDITURE WITHIN PLAN	0.39	0.39	0.39	0.39
2.	CUMULATIVE BUDGET RECOMMENDED	0.44	1.06	1.66	2.09
	FMR	0.89	0.37	0.23	0.19
	TYNE WEAR AREA - NON TRUNK ROADS				
1.	CUMULATIVE EXPENDITURE WITHIN PLAN	4.10	12.84	23.49	25.54
2.	CUMULATIVE BUDGET RECOMMENDED	22.81	43.85	57.60	71.00
	FMR	0.18	0.29	0.41	0.36
3.	CUMULATIVE EXPENDITURE WITHIN AND OUTSIDE PLAN	4.41	13.46	24.46	26.68
	FMR	0.93	0.95	0.96	0.96
	TYNE WEAR AREA - TRUNK ROADS				
1.	CUMULATIVE EXPENDITURE WITHIN PLAN	0.86	2.03	4.38	4.38
2.	CUMULATIVE BUDGET RECOMMENDED	2.97	5.94	7.28	8.63
	FMR	0.29	0.34	0.60	0.51
	TYNE WEAR AREA - PUBLIC TRANSPORT INFRASTRUCTURE				

ST. HELENS TRAFFIC AND TRANSPORT PLAN

DETAILS OF SCHEMES AND PHASING OF EXPENDITURE
NON-TRUNK ROADS : EXPENDITURE IN 1970 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1971 TO 1973	1974 TO 1976
1.	A58 Church Street to Finger Post Improvement	0.56	0.39
2.	A570 Church Street Improvement		0.35
3.	A570 Dentons Green Lane/Kirkland Street Improvement		0.52
4.	Inner Ring Road - Stage IV		0.30
5.	A58 Park Road Improvement		0.20
6.	A572 Chancery Lane - Phase II		
7.	A58 Blackbrook Road at Borough Boundary	0.02	0.03
8.	A58 Cotham Street		
	CUMULATIVE BUDGETED EXPENDITURE	0.58	2.37
1.	A58 Church Street to Finger Post Improvement	0.40	0.55
2.	A58 Blackbrook Road at Borough Boundary		0.01
	CUMULATIVE ACTUAL EXPENDITURE	0.40	0.96
	FMR	0.69	0.41
	FMQ = 1.0		
	THE PLAN DID NOT DEAL WITH TRUNK ROADS		

COVENTRY

DETAILS OF RECOMMENDED SCHEMES AND PHASING OF BUDGETED EXPENDITURE

NON TRUNK ROADS : EXPENDITURE IN 1967 PRICE BASIS £ MILLIONS

SCHEME NO	SCHEME DESCRIPTION	1967 to 1968	1969 to 1970	1971 to 1973	1974 to 1976
1	Coventry Inner Ring Road : Stage 4	1.30	- committed (exclude)		
2	Coventry Inner Ring Road : Stage 5	2.20	2.20		
3	Coventry Inner Ring Road : Stage 6			2.80	2.80
4	Clifford Bridge Road Improvement	0.16	0.30		
5	North-South Motorway - Stonebridge Highway to London Road		3.00		
6	North-South Motorway - Hen Lane to City Boundary	1.00			
7	Outer Connector - North/South Motorway to Foles Hill Road			0.40	
8	Radford Road Improvement- Three Spires Avenue to Light Lane			0.40	
9	Gosfor Spur: Inner Ring Road to Binley Road			1.06	
10	Binley Road Improvements - Brindle Avenue to Craven Arms			0.50	
11	Bell Green Road - Sewall Highway to Henley Road			0.16	
12	Warwick Road Widening			0.20	
13	Leamington Road - Reconstruction of Roundabout & Improvements			0.12	
14	University Valley Route - Charter A venue to Canon Park Junction			0.20	
15	Brinklow Road Improvements - Clifford Bridge Rd to City Boundary			0.10	
16	North-South Motor Road - Central Section: London Road to Hen Lane			5.10	2.60
17	Binley Road Improvement - Gosford Green to Brindle Avenue				0.45
18	London Road Improvement - Inner Ring Road to N/S Motor Road				0.22
19	Butts Radial Extension - Four Pounds Avenue to Butts Radial				0.23
20	University Valley Road - Cannon Park Junction to City Boundary				0.40
21	Outer Connector - Longford to Walsgrave Carriageway				1.88

COVENTRY (CONTINUED)

DETAILS OF RECOMMENDED SCHEMES AND PHASING OF BUDGETED EXPENDITURE

NON TRUNK ROADS : EXPENDITURE IN 1967 PRICE BASIS £ MILLIONS

SCHEME NO	SCHEME DESCRIPTION	1967 to 1968	1969 to 1970	1971 to 1973	1974 to 1976
22	New Link Road - Holbrooks Lane to N/S Motor Road				0.50
23	London Road/A45 Junction Roundabout Reconstruction and flyover				0.80
24	Charter Avenue/A45 Junction Roundabout reconstruction and underpass				0.60
25	Tile Hill Lane/A45 Junction Roundabout reconstruction and new flyover				0.60
26	Mitchell Avenue Extension				0.35
	BUDGETED PHASING	3.36	5.48	11.04	5.58
	CUMULATIVE BUDGET	3.36	18.84	19.88	25.46

COVENTRY : EXPENDITURE & CALCULATION OF FMR AND FMQ

DETAILS OF RECOMMENDED SCHEMES AND PHASING OF BUDGETED EXPENDITURE

NON TRUNK ROADS : EXPENDITURE IN 1967 PRICE BASIS £ MILLIONS

SCHEME NO	SCHEME DESCRIPTION	1967 to 1968	1969 to 1970	1971 to 1973	1974 to 1976
	COMPLETED SCHEMES : RECOMMENDED				
2	Inner Ring Road - Stage 5				
	- Swanswell Terrace to London Road	1.86	1.86		
3	Inner Ring Road - Stage 6			1.72	1.15
4	B4481 Clifford Bridge Road - Stages 2 & 3				
	Two Bridges to Craven Arms			0.29	
5	North/South Road - A423 London Road to				
	Stone Bridge Highway (A45)			0.63	0.95
	CUMULATIVE EXPENDITURE	1.86	3.72	6.36	8.46
	CUMULATIVE BUDGET (BROUGHT DOWN)	3.36	18.84	19.88	25.46
	FMR	0.55	0.20	0.32	0.33
	FMQ = 1.00				

SOUTHAMPTON : OUTLINE TRANSPORTATION PLAN 1968

DETAILS OF RECOMMENDED SCHEMES AND PHASING OF BUDGETED EXPENDITURE

NON TRUNK ROADS : EXPENDITURE IN 1967 PRICE BASIS £ MILLIONS

SCHEME NO	SCHEME DESCRIPTION	1968 to 1970	1971 to 1973	1974 to 1975	1976 to 1978
1	The Western Approach	0.24	0.80	2.16	
2	Docks Road, Stage III	0.12	0.04		
3	A3024 Bitterne Bypass		0.82		
4	Portswood Link		1.45	1.45	2.00
5	A3024/A334 Northam Road, Six Dials to Northam Bridge, Improvement		0.38	1.37	
6	Windhover Interchange with A27 and A3024 Bursledon Road, east of the City				
7	Hedge End Interchange with a link road to Thornhill Roundabout				
8.	West End Interchange with Link Road to A27 and Town Hill Way (Town Hill Link)				
9	Nursling Interchange with link Road to A3057 - Romsey Road with a connection to an extension of the Lord's Hill Spine Road				
10	Red Bridge Roundabout Grade separation				
	SUB TOTAL - ITEMS 6 to 10				5.52
	CUMULATIVE BUDGET : RECOMMENDED SCHEMES	0.88	4.37	9.35	16.87
	DETAILS OF IMPLEMENTATION				
2	Docks Road Extension - St Mary's Place to Queen's Park	0.27			
11	A35 - Red Bridge Road Improvement	0.52			
1	The Western Approach (advance railway bridge works)		0.73	0.10	
	CUMULATIVE EXPENDITURE	0.79	1.52	1.62	1.62
	FMR FMQ = 100	0.96	0.35	0.17	0.10

TEESIDE SURVEY AND PLAN

DETAILS OF SCHEMES AND CALCULATION OF FMQ AND FMR: EXPENDITURE IN 1966 PRICE BASIS (£ MILLIONS)

SCHEME NO	SCHEME DESCRIPTION	1966 to 1973	1974 to 1976	1977 to 1978
	MIDDLESBOROUGH : NON TRUNK ROADS			
A	RECOMMENDED SCHEMES			
1	A171 North Ormsby Bridge	0.90		
2	A1027 Ring Road : Stage 3	0.35		
3	Northern Loop - Stage IA	2.60		
4	Northern Loop - Stage IB	0.95	0.95	
5	Northern Loop - Stages II and III		0.90	0.90
	CUMULATIVE RECOMMENDED TOTAL	4.80	6.65	7.55
B	IMPLEMENTED SCHEMES			
1	A171 North Ormsby Bridge	0.83		
2	A1027 Ring Road : Stage 3	0.24		
3	Northern Loop - Stage 1A (Implemented by Teeside CBC)		2.60	
	CUMULATIVE EXPENDITURE TOTAL	1.07	3.67	-
	FMR	0.22	0.55	

No major schemes outside the plan was implemented until 1976

Therefore, FMQ = 1.00

PORTSMOUTH : FUTURE ROAD PATTERN

DETAILS OF RECOMMENDED SCHEMES AND PHASING OF BUDGETED EXPENDITURE
NON-TRUNK ROADS : EXPENDITURE IN 1965 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1965 TO 1967	1968 TO 1969	1970 TO 1973	1974 TO 1976
1.	Continuation of Inner Ring Route (Anglesea Road-St. Michael's Road)	0.22			
2.	East-West Route: St. Michael's Road Intersection to Bradford Road Junction/Fratton Bridge		0.80		
3.	North/South Route - Inner Ring Route to Alexandra Park			2.00	
4.	North/South Route - Alexandra Park to Southampton Road			1.19	0.30
5.	Inner Ring Route: Bradford Road Roundabout to Lake Road Roundabout			0.73	0.18
6.	Inner Ring Route: Flyover at Unicorn Road			0.35	
7.	Eastern Road Extension - Tangier Road to Eastney Esplanade			0.58	0.15
8.	East/West Route: Bradford Road Junction to Locks R/About			0.87	0.22
	The next 3 roads were planned for the 5 years 1975-1979. I have assumed 40% of the total to be completed during 1975 and 1976				
9.	London Road (Portsbridge to City Boundary)				0.18
10.	Southampton Road (Allaway Avenue to City Boundary)				0.24
11.	North/South Route: Alexandra Park to Victoria Road North				2.40
	CUMULATIVE TOTAL BUDGET	0.22	1.02	6.74	10.41

PORTSMOUTH : FUTURE ROAD PATTERN

DETAILS OF COMPLETED SCHEMES AND CALCULATION OF FMR AND FMQ
NON-TRUNK ROADS : EXPENDITURE IN 1965 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1965 TO 1967	1968 TO 1969	1970 TO 1973	1974 TO 1976
1.	Extension of Dockyard Loop to Anglesey Road	0.11	0.11		
2.	A2046 Inner Ring Road: Southern Section: Stage 1			0.39	
3.	M275 - Tipner Link Stage I: Tipner Lane to Kingston Crescent			1.46	0.98
4.	M275 - Tipner Link Stage II: M27 to Tipner Lane			1.01	0.67
5.	A2046 Southern Section - Stages 2 & 3: Goldsmith Avenue			0.31	0.17
6.	A3 Commercial Road - Church Street to Kingston Crescent				1.06
	CUMULATIVE ACTUAL EXPENDITURE	0.11	0.22	3.39	6.27
	FMR	0.50	0.22	0.50	0.60
	FMQ = 1.00				

NOTTINGHAM

DETAILS OF RECOMMENDED SCHEMES AND PHASING OF BUDGETED EXPENDITURE

NON TRUNK ROADS : EXPENDITURE IN 1966 PRICE BASIS £ MILLIONS

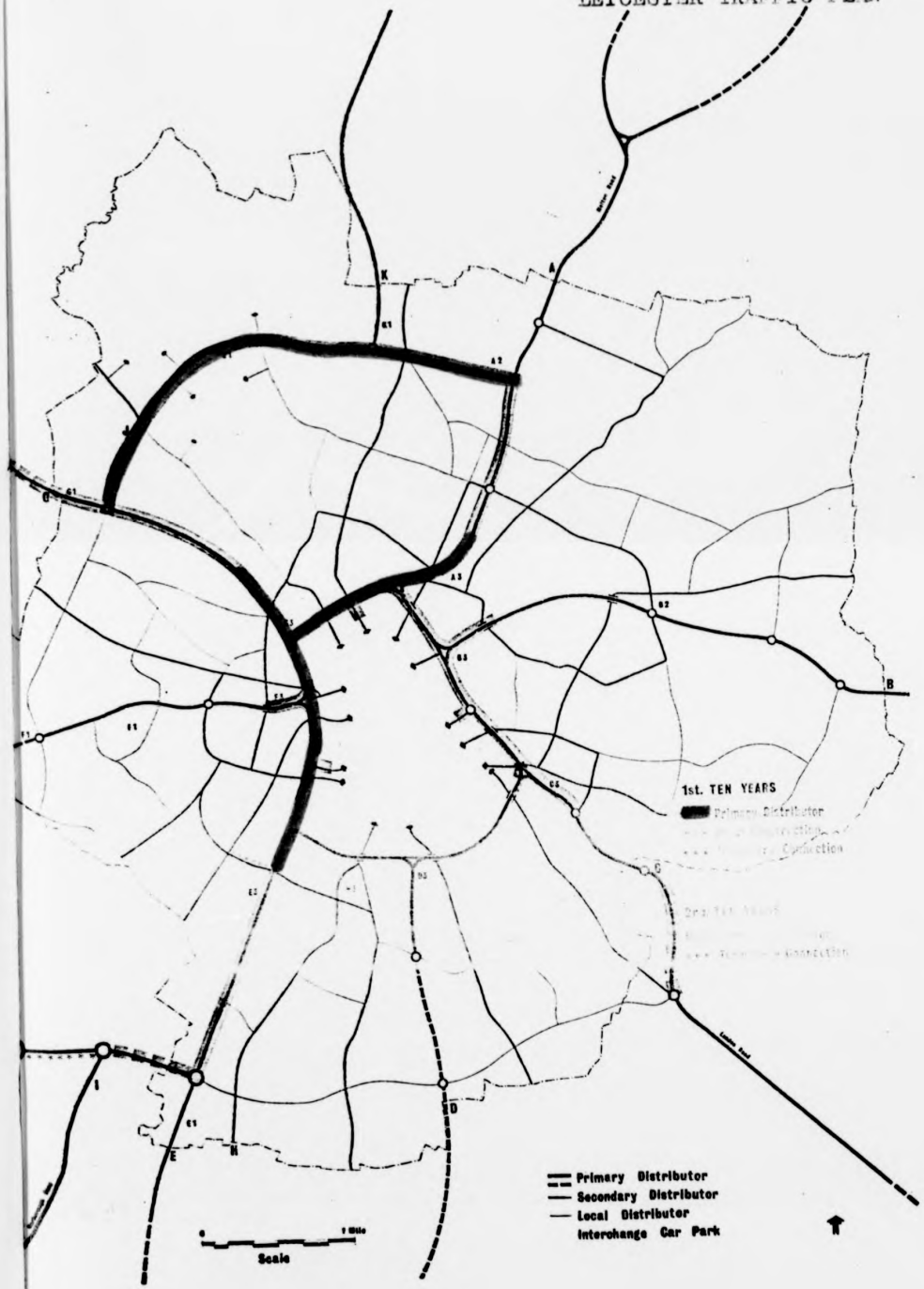
SCHEME NO	SCHEME DESCRIPTION	1976 to 1970	1971 to 1973	1974 to 1977
	RECOMMENDED SCHEMES			
1	A6130 - Sheriffs Way- Phase I	3.3		
2	A6130 - Sheriffs Way- Phase II	3.6		
3	Eastern bypass - Phase I	0.3		
4	A6008 - Theatre Square Gyratory system	0.3		
5	A612 - London Road: Meadows Way to Canal St	3.4		
6	A612 - London Road : Canal St Southwards		2.7	
7	Clifton Boulevard Improvement, Barton Lane to Queen's Drive		2.4	
88	Barton Lane Improvement - Clifton Boulevard to County Boundary			1.8
9	Castle Boulevard Improvement			1.6
10	Canning Circus Underpass			1.1
	BUDGETED PHASING	10.9	5.10	4.5
	CUMULATIVE BUDGET	10.9	16.00	20.5
	COMPLETED SCHEME			PLAN ABANDONED
1	Canal Street/London Road Roundabout	0.10		
2	A612 London Road High Level Station to Canal Street	0.10		
3	A6008 Inner Ring Road Eastern Sector		0.32	
4	A6008 Inner Ring Road/Theatre Square gyratory		0.32	
	CUMULATIVE EXPENDITURE	0.20	0.84	0.84
	FMR	0.20	0.05	0.04
	FMQ	1.00	1.00	LOW

LEICESTER TRAFFIC PLAN

DETAILS OF RECOMMENDED & COMPLETED SCHEMES AND CALCULATION OF FMR AND FMQ : 1965 PRICE BASIS

SCHEME NO	SCHEME DESCRIPTION	£ Million	1965 to 1973	1974 to 1975
	The recommended proposals including its phasing is shown in Fig 101 (Appendix). The whole scheme was estimated to cost £107.5 million (1964 costs) of which:			
	Phase I (Planned for implementation between 1964-73) Estimate =	32		
	Phase II (Planned for implementation between 1975-84) estimate =	31		
	Phase III (Planned for implementation between 1985-94) estimate =	44.5		
	Therefore, Recommended budget for the period			
	1964 to 1973 =		32.0	
	Recommended budget for the period			
	1974 to 1975			38.2
	DETAILS OF IMPLEMENTED SCHEMES			
A	Within Plan			
1.	Central Ring Road : Stages 4 and 5 =		1.65	
2.	St Margarets Way Improvement: Phase I =		0.94	
	CUMULATIVE EXPENDITURE WITHIN PLAN		2.59	2.59
	FMR		0.08	0.07
	Plan Replaced by Greater Leicester Transportation Study			
B	DETAILS OF IMPLEMENTED SCHEMES Outside Plan			
3.	A6 Abbey Park Road/A46 Belgrave Road Improvement			0.92
4.	A50 Granby Halls Gyratory			0.47
5.	Loughborough Road to Melton Road: A46 Improvement		0.20	0.20
6.	St Margaret's Way to Humberstone Road Improvement (PART ONLY)			0.82
	CUMULATIVE EXPENDITURE WITHIN AND OUTSIDE PLAN		2.79	5.00
	FMQ		0.93	0.52

LEICESTER TRAFFIC PLAN



CAMBRIDGE TRANSPORTATION PLAN

This plan was published in 1972 for a period up to 1986. The study referred to the following trunk roads which were all completed as planned.

1. A45 (T) Newmarket Road dualling (Coldham's Lane to Ditton Walk)
2. A45(T) Madingley Road improvement at Merton Hall Farm
3. A10(T) Magdalene Bridge improvement
4. M11 Western by-pass - Stumps-X to A604(T)
5. A45(T) Northern by-pass
6. A604(T) Huntingdon Road improvement
7. Cambridge Northern by-pass

However the plan also recommended non-trunk road schemes to the value of £2.44 million (1970 prices) to be completed during the period 1972-76. None of the non-trunk road schemes were implemented within this period.

Therefore, FMQ = 0 FMQ = Not applicable

THIS STUDY WILL NOT BE USED FOR DETAILED ANALYSIS BECAUSE CAMBRIDGE IS NOT A COUNTY BOROUGH.

OXFORD CENTRAL AREA STUDY

This study recommended a cumulative investment of 16 million pounds plus or minus 20 per cent to be expended over a study period of 13 years. However no scheme either recommended or outside the plan was implemented during the study period within the study area.

Therefore $FMR_{1978} = 0$ Also FMQ is NOT APPLICABLE

ABINGDON ENVIRONMENT AND TRANSPORT STUDY

This study was commissioned by the Abingdon Borough Council to look into the environmental implications of implementating the proposals contained in the Didcot, Abingdon, Wantage Transportation Study. The consultants to the former study Llewelyn Davies Weeks Forestier - Walker & Bor recommended alternative river crossings for the Thames in Abingdon. These alternative recommendations were found unacceptable to the highway authority - the Berkshire County Council.

Therefore $FMR_{1978} = 0$, FMQ is NOT APPLICABLE

BATH : A PLANNING AND TRANSPORT STUDY

This study was published in 1965 for completion in four phases by 1985.

Estimated cost of Phase I (1965-1969) = £5.535 million

Estimated cost of Phase II(1970-1974) = £0.968 million

However, none of these plans were implemented. Therefore

FMR = 0 and FMQ = NOT APPLICABLE

The study identified two trunk roads for completion (M4 and M5) which were completed as planned.

SLOUGH TRANSPORTATION STUDY

DETAILS OF SCHEMES AND PHASING OF EXPENDITURE NON-TRUNK ROADS : EXPENDITURE IN 1969 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1970 TO 1972	1973 TO 1974	1975 TO 1976	1977 TO 1978
1.	Wellington Street extension to relieve A4 - Slough High Street	3.33			
	The following roads were programmed for completion during the period 1971 to 1980 however no expenditure phasing is given in the plan. Since Slough is not a county borough, I will not be using this result for detailed analysis. Therefore, I have simply assumed an equal distribution of budgeted phasing to calculate FMR for Chapter V only.				
2.	Local cross-route between Slouth Trading Estate in Farnham (West) of town and Uxbridge Road - Dual carriageway				
3.	The Canal Drive - East/West arm of the inner ring-road to the North of town				
4.	Realignment of A332 single c/ way from the junction with Slough Northern Road to the bottom of Balls Hills				
5.	Diversion of Upton Road B376 and the realignment of Albert Street				
6.	Dualling of A332 - Windsor Road and Stoke Road				
7.	Dualling of Uxbridge Road A412				
8.	Dualling of Farnham Road B473				
9.	Langley High Street/Station Road - Langley: B470				
10.	Dualling of Church Street, Chalvey Road West, Chalvey Road East and Albert Road				

SLOUGH TRANSPORTATION STUDY

DETAILS OF SCHEMES AND PHASING OF BUDGETED EXPENDITURE NON-TRUNK ROADS : EXPENDITURE IN 1969 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1970 TO 1972	1973 TO 1974	1975 TO 1976	1977 TO 1978
11.	Dualling of Datchet Road				
	The estimated cost of completing the last 10 items is £8.80 million				
	Cumulative budgeted expenditure phasing: Items 2-11 =	1.76	3.52	5.28	7.04
	Cumulative budgeted expenditure phasing: Items 1-11 =	5.09	6.85	8.61	10.37
	DETAILS OF COMPLETED SCHEMES				
1.	Wellington Street Extension	2.42	0.91		
	Cumulative expenditure - Actual	2.42	3.33	3.33	3.33
	FMR	0.48	0.49	0.39	0.32
	FMQ = 100%				
	TRUNK ROADS PLANNED				
1.	North Orbital Road from A40/M40 junction at Denham on the North to the A30 at Egham on the South with an intersection with M4 at Richings Park, Iver.				
	This together with M4, M40 and the Marlow Bypass (A404) is expected to form a motorway box round Slough and is assessed in the plan				
2.	Diversion of A355 from South of Farnham Royal Village to North of Farnham Common				
	None of the trunk road schemes were completed until 1978				
	FMR (TRUNK ROADS) = 0				
	FMQ = Not applicable				

HERTFORD, WARE AND HODDESDON TRANSPORTATION STUDY

TRAFFIC AND ROADS 1981

PUBLISHED BY : HERTFORDSHIRE COUNTY COUNCIL - MARCH 1968

DETAILS OF SCHEMES RECOMMENDED AND IMPLEMENTED : NON TRUNK ROADS

(All Costs Stated Below are in 1968 Price Basis)

(i) SCHEMES RECOMMENDED FOR COMPLETION BETWEEN 1968 and 1972

SCHEME	ESTIMATE (million)	OUT TURN EXPENDITURE PHASING 1968	1969	1970	1971	1972	1973	1974	1975	1976
1. Hertford Link Road	0.220)					0.03	0.03	0.03	0.03	
2. North Orbital Link Rd	0.220)									
3. Hoddesdon Relief Road Phase I(a) - committed scheme completed by 1969	0.214									
4. Hoddesdon Relief Road Phase I(b)	0.055							0.02	0.02	0.02
5. Ware Relief Road, Ph I	0.620									
6. Hertingfordbury bypass & A414 to Cross Lane	0.220						0.05	0.06	0.05	0.06
7. Stanstead Abbots by-pass	0.677									
8. Hertford North Relief Road, Phase I	0.275									
9. Station Road Hertford	0.045									
SUB TOTAL EXCLUDING SCHEME (3)	2.332					0.03	0.13	0.16	0.15	0.03

(ii) SCHEMES RECOMMENDED FOR COMPLETION BETWEEN 1973 and 1981

10. Ware Relief Rd, Ph II	0.400
11. Hertingfordbury by-pass & A414 dualling	0.350
12. Hertford/Ware Link Rd	0.360
13. A602 Dualling Ware Rd to Hertford Link	0.100
14. Hertford North Relief Rd, Phase II	1.225
15. Western Link Road	0.220
16. Old Cross Link Road	0.220
TOTAL RECOMMENDED EXPENDITURE 1968 to 1981 (ex scheme 3)	4.207

TEESIDE SURVEY AND PLAN

DETAILS OF SCHEMES AND CALCULATION OF FMQ AND FMR: EXPENDITURE IN 1966 PRICE BASIS (£ MILLIONS)

SCHEME NO	SCHEME DESCRIPTION	1966 to 1973	1974 to 1976	1977 to 1978
	MIDDLESBOROUGH : NON TRUNK ROADS			
A	RECOMMENDED SCHEMES			
1	A171 North Ormsby Bridge	0.90		
2	A1027 Ring Road : Stage 3	0.35		
3	Northern Loop - Stage IA	2.60		
4	Northern Loop - Stage IB	0.95	0.95	
5	Northern Loop - Stages II and III		0.90	0.90
	CUMULATIVE RECOMMENDED TOTAL	4.80	6.65	7.55
B	IMPLEMENTED SCHEMES			
1	A171 North Ormsby Bridge	0.83		
2	A1027 Ring Road : Stage 3	0.24		
3	Northern Loop - Stage 1A (Implemented by Teeside CBC)		2.60	
	CUMULATIVE EXPENDITURE TOTAL	1.07	3.67	-
	FMR	0.22	0.55	

No major schemes outside the plan was implemented until 1976

Therefore, FMQ = 1.00

PORTSMOUTH : FUTURE ROAD PATTERN

DETAILS OF RECOMMENDED SCHEMES AND PHASING OF BUDGETED EXPENDITURE
NON-TRUNK ROADS : EXPENDITURE IN 1965 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1965 TO 1967	1968 TO 1969	1970 TO 1973	1974 TO 1976
1.	Continuation of Inner Ring Route (Anglesea Road-St. Michael's Road)	0.22			
2.	East-West Route: St. Michael's Road Intersection to Bradford Road Junction/Fratton Bridge		0.80		
3.	North/South Route - Inner Ring Route to Alexandra Park			2.00	
4.	North/South Route - Alexandra Park to Southampton Road			1.19	0.30
5.	Inner Ring Route: Bradford Road Roundabout to Lake Road Roundabout			0.73	0.18
6.	Inner Ring Route: Flyover at Unicorn Road			0.35	
7.	Eastern Road Extension - Tangier Road to Eastney Esplanade			0.58	0.15
8.	East/West Route: Bradford Road Junction to Locks R/About			0.87	0.22
	The next 3 roads were planned for the 5 years 1975-1979. I have assumed 40% of the total to be completed during 1975 and 1976				
9.	London Road (Portsbridge to City Boundary)				0.18
10.	Southampton Road (Allaway Avenue to City Boundary)				0.24
11.	North/South Route: Alexandra Park to Victoria Road North				2.40
	CUMULATIVE TOTAL BUDGET	0.22	1.02	6.74	10.41

PORTSMOUTH : FUTURE ROAD PATTERN

DETAILS OF COMPLETED SCHEMES AND CALCULATION OF FMR AND FMQ
NON-TRUNK ROADS : EXPENDITURE IN 1965 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1965 TO 1967	1968 TO 1969	1970 TO 1973	1974 TO 1976
1.	Extension of Dockyard Loop to Anglesey Road	0.11	0.11		
2.	A2046 Inner Ring Road: Southern Section: Stage 1			0.39	
3.	M275 - Tipner Link Stage I: Tipner Lane to Kingston Crescent			1.46	0.98
4.	M275 - Tipner Link Stage II: M27 to Tipner Lane			1.01	0.67
5.	A2046 Southern Section - Stages 2 & 3: Goldsmith Avenue			0.31	0.17
6.	A3 Commercial Road - Church Street to Kingston Crescent				1.06
	CUMULATIVE ACTUAL EXPENDITURE	0.11	0.22	3.39	6.27
	FMR	0.50	0.22	0.50	0.60
	FMQ = 1.00				

NOTTINGHAM

DETAILS OF RECOMMENDED SCHEMES AND PHASING OF BUDGETED EXPENDITURE

NON TRUNK ROADS : EXPENDITURE IN 1966 PRICE BASIS £ MILLIONS

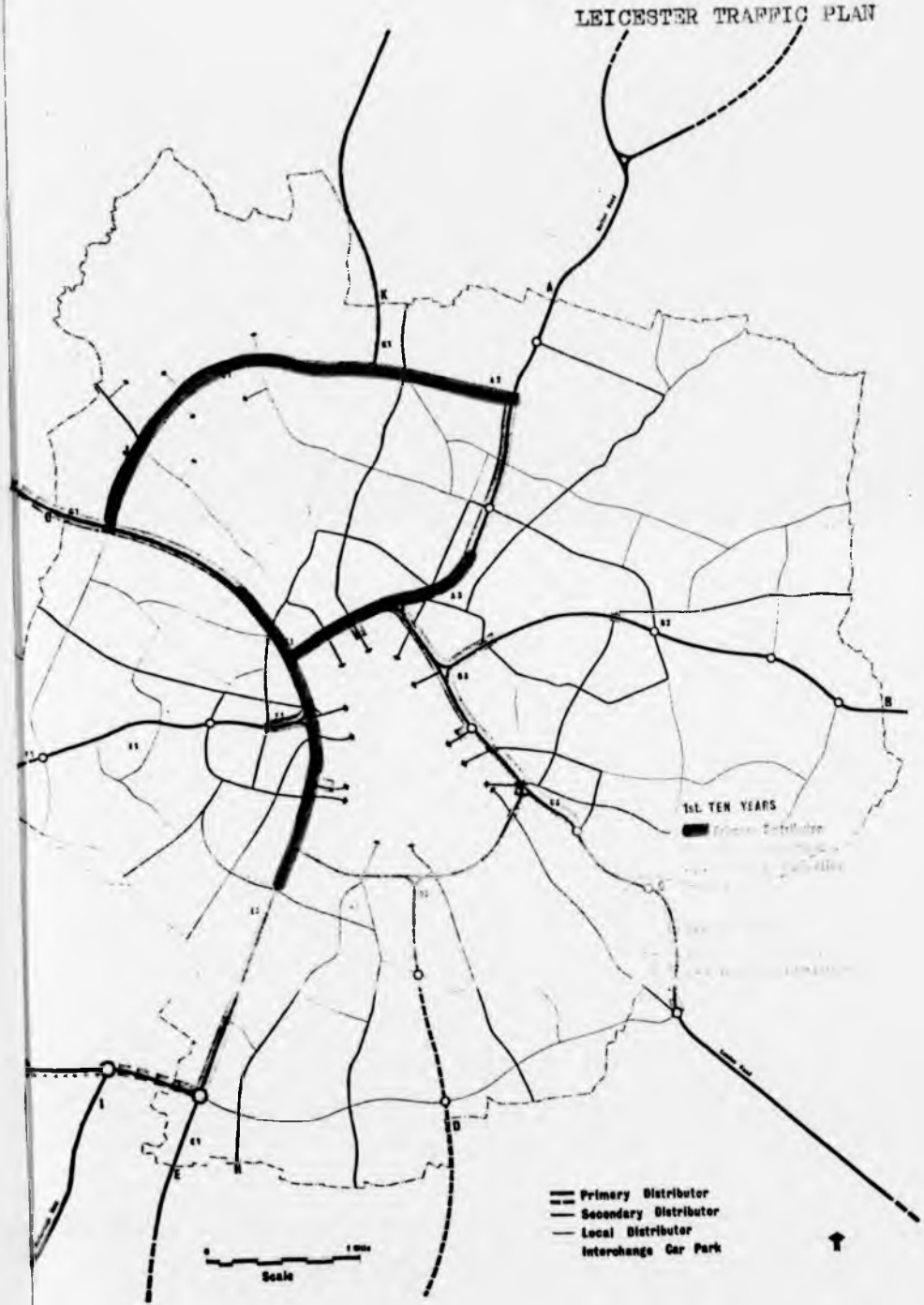
SCHEME NO	SCHEME DESCRIPTION	1976 to 1970	1971 to 1973	1974 to 1977
	RECOMMENDED SCHEMES			
1	A6130 - Sheriffs Way- Phase I	3.3		
2	A6130 - Sheriffs Way- Phase II	3.6		
3	Eastern bypass - Phase I	0.3		
4	A6008 - Theatre Square Gyratory system	0.3		
5	A612 - London Road: Meadows Way to Canal St	3.4		
6	A612 - London Road : Canal St Southwards		2.7	
7	Clifton Boulevard Improvement, Barton Lane to Queen's Drive		2.4	
88	Barton Lane Improvement - Clifton Boulevard to County Boundary			1.8
9	Castle Boulevard Improvement			1.6
10	Canning Circus Underpass			1.1
	BUDGETED PHASING	10.9	5.10	4.5
	CUMULATIVE BUDGET	10.9	16.00	20.5
	COMPLETED SCHEME			PLAN ABANDONED
1	Canal Street/London Road Roundabout	0.10		
2	A612 London Road High Level Station to Canal Street	0.10		
3	A6008 Inner Ring Road Eastern Sector		0.32	
4	A6008 Inner Ring Road/Theatre Square gyratory		0.32	
	CUMULATIVE EXPENDITURE	0.20	0.84	0.84
	FMR	0.20	0.05	0.04
	FMQ	1.00	1.00	LOW

LEICESTER TRAFFIC PLAN

DETAILS OF RECOMMENDED & COMPLETED SCHEMES AND CALCULATION OF FMR AND FMQ : 1965 PRICE BASIS

SCHEME NO	SCHEME DESCRIPTION	£ Million	1965 to 1973	1974 to 1975
	The recommended proposals including its phasing is shown in Fig 101 (Appendix). The whole scheme was estimated to cost £107.5 million (1964 costs) of which:			
	Phase I (Planned for implementation between 1964-73) Estimate =	32		
	Phase II (Planned for implementation between 1975-84) estimate =	31		
	Phase III (Planned for implementation between 1985-94) estimate =	44.5		
	Therefore, Recommended budget for the period			
	1964 to 1973 =		32.0	
	Recommended budget for the period			
	1974 to 1975			38.2
	DETAILS OF IMPLEMENTED SCHEMES			
A	Within Plan			
1.	Central Ring Road : Stages 4 and 5 =		1.65	
2.	St Margarets Way Improvement: Phase 1 =		0.94	
	CUMULATIVE EXPENDITURE WITHIN PLAN		2.59	2.59
	FMR		0.08	0.07
	Plan Replaced by Greater Leicester Transportation Study			
B	DETAILS OF IMPLEMENTED SCHEMES Outside Plan			
3.	A6 Abbey Park Road/A46 Belgrave Road Improvement			0.92
4.	A50 Granby Halls Gyratory			0.47
5.	Loughborough Road to Melton Road: A46 Improvement		0.20	0.20
6.	St Margaret's Way to Humberstone Road Improvement (PART ONLY)			0.82
	CUMULATIVE EXPENDITURE WITHIN AND OUTSIDE PLAN		2.79	5.00
	FMQ		0.93	0.52

LEICESTER TRAFFIC PLAN



A28

CAMBRIDGE TRANSPORTATION PLAN

This plan was published in 1972 for a period up to 1986. The study referred to the following trunk roads which were all completed as planned.

1. A45 (T) Newmarket Road dualling (Coldham's Lane to Ditton Walk)
2. A45(T) Madingley Road improvement at Merton Hall Farm
3. A10(T) Magdalene Bridge improvement
4. M11 Western by-pass - Stumps-X to A604(T)
5. A45(T) Northern by-pass
6. A604(T) Huntingdon Road improvement
7. Cambridge Northern by-pass

However the plan also recommended non-trunk road schemes to the value of £2.44 million (1970 prices) to be completed during the period 1972-76. None of the non-trunk road schemes were implemented within this period.

Therefore, FMR = 0 FMQ = Not applicable

THIS STUDY WILL NOT BE USED FOR DETAILED ANALYSIS BECAUSE CAMBRIDGE IS NOT A COUNTY BOROUGH.

OXFORD CENTRAL AREA STUDY

This study recommended a cumulative investment of 16 million pounds plus or minus 20 per cent to be expended over a study period of 13 years. However no scheme either recommended or outside the plan was implemented during the study period within the study area.

Therefore $FMR_{1978} = 0$ Also FMQ is NOT APPLICABLE

ABINGDON ENVIRONMENT AND TRANSPORT STUDY

This study was commissioned by the Abingdon Borough Council to look into the environmental implications of implementating the proposals contained in the Didcot, Abingdon, Wantage Transportation Study. The consultants to the former study Llewelyn Davies Weeks Forestier - Walker & Bor recommended alternative river crossings for the Thames in Abingdon. These alternative recommendations were found unacceptable to the highway authority - the Berkshire County Council.

Therefore $FMR_{1978} = 0$, FMQ is NOT APPLICABLE

BATH : A PLANNING AND TRANSPORT STUDY

This study was published in 1965 for completion in four phases by 1985.

Estimated cost of Phase I (1965-1969) = £5.535 million

Estimated cost of Phase II(1970-1974) = £0.968 million

However, none of these plans were implemented. Therefore

FMR = 0 and FMQ = NOT APPLICABLE

The study identified two trunk roads for completion (M4 and M5) which were completed as planned.

SLOUGH TRANSPORTATION STUDY

DETAILS OF SCHEMES AND PHASING OF EXPENDITURE NON-TRUNK ROADS : EXPENDITURE IN 1969 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1970 TO 1972	1973 TO 1974	1975 TO 1976	1977 TO 1978
1.	Wellington Street extension to relieve A4 - Slough High Street	3.33			
	The following roads were programmed for completion during the period 1971 to 1980 however no expenditure phasing is given in the plan. Since Slough is not a county borough, I will not be using this result for detailed analysis. Therefore, I have simply assumed an equal distribution of budgeted phasing to calculate FMR for Chapter V only.				
2.	Local cross-route between Slouth Trading Estate in Farnham (West) of town and Uxbridge Road - Dual carriageway				
3.	The Canal Drive - East/West arm of the inner ring-road to the North of town				
4.	Realignment of A332 single c/ way from the junction with Slough Northern Road to the bottom of Balls Hills				
5.	Diversion of Upton Road B376 and the realignment of Albert Street				
6.	Dualling of A332 - Windsor Road and Stoke Road				
7.	Dualling of Uxbridge Road A412				
8.	Dualling of Farnham Road B473				
9.	Langley High Street/Station Road - Langley: B470				
10.	Dualling of Church Street, Chalvey Road West, Chalvey Road East and Albert Road				

SLOUGH TRANSPORTATION STUDY

DETAILS OF SCHEMES AND PHASING OF BUDGETED EXPENDITURE NON-TRUNK ROADS : EXPENDITURE IN 1969 PRICE BASIS (£ MILLIONS)

SCHEME NO.	SCHEME DESCRIPTION	1970 TO 1972	1973 TO 1974	1975 TO 1976	1977 TO 1978
11.	Dualling of Datchet Road				
	The estimated cost of completing the last 10 items is £8.80 million				
	Cumulative budgeted expenditure phasing: Items 2-11 =	1.76	3.52	5.28	7.04
	Cumulative budgeted expenditure phasing: Items 1-11 =	5.09	6.85	8.61	10.37
	DETAILS OF COMPLETED SCHEMES				
1.	Wellington Street Extension	2.42	0.91		
	Cumulative expenditure - Actual	2.42	3.33	3.33	3.33
	FMR	0.48	0.49	0.39	0.32
	FMQ = 100%				
	TRUNK ROADS PLANNED				
1.	North Orbital Road from A40/M40 junction at Denham on the North to the A30 at Egham on the South with an intersection with M4 at Richings Park, Iver.				
	This together with M4, M40 and the Marlow Bypass (A404) is expected to form a motorway box round Slough and is assessed in the plan				
2.	Diversion of A355 from South of Farnham Royal Village to North of Farnham Common				
	None of the trunk road schemes were completed until 1978				
	FMR (TRUNK ROADS) = 0				
	FMQ = Not applicable				

HERTFORD, WARE AND HODDESDON TRANSPORTATION STUDY

TRAFFIC AND ROADS 1981

PUBLISHED BY : HERTFORDSHIRE COUNTY COUNCIL - MARCH 1968

DETAILS OF SCHEMES RECOMMENDED AND IMPLEMENTED : NON TRUNK ROADS

(All Costs Stated Below are in 1968 Price Basis)

(i) SCHEMES RECOMMENDED FOR COMPLETION BETWEEN 1968 and 1972

SCHEME	ESTIMATE (million)	OUT TURN EXPENDITURE PHASING 1968	1969	1970	1971	1972	1973	1974	1975	1976
1. Hertford Link Road	0.220)					0.03	0.03	0.03	0.03	
2. North Orbital Link Rd	0.220)									
3. Hoddesdon Relief Road Phase I(a) - committed scheme completed by 1969	0.214									
4. Hoddesdon Relief Road Phase I(b)	0.055							0.02	0.02	0.02
5. Ware Relief Road, Ph I	0.620									
6. Hertingfordbury bypass & A414 to Cross Lane	0.220						0.05	0.06	0.05	0.06
7. Stanstead Abbots by-pass	0.677									
8. Hertford North Relief Road, Phase 1	0.275									
9. Station Road Hertford	0.045									
SUB TOTAL EXCLUDING SCHEME (3)	2.332					0.03	0.13	0.16	0.15	0.03

(ii) SCHEMES RECOMMENDED FOR COMPLETION BETWEEN 1973 and 1981

10. Ware Relief Rd, Ph II	0.400
11. Hertingfordbury by-pass & A414 dualling	0.350
12. Hertford/Ware Link Rd	0.360
13. A602 Dualling Ware Rd to Hertford Link	0.100
14. Hertford North Relief Rd, Phase II	1.225
15. Western Link Road	0.220
16. Old Cross Link Road	0.220
TOTAL RECOMMENDED EXPENDITURE 1968 to 1981 (ex scheme 3)	4.207

YEAR	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	
CUMULATIVE TOTAL OF RECOMMENDED EXPENDITURES	0.47	0.93	1.40	1.87	2.33	2.65	2.97	3.29	3.61	3.93	4.25	x £10^6
CUMULATIVE OUT-TURN EXPENDITURES	0	0	0	0	0.08	0.21	0.37	0.52	0.60	0.60	0.60	x £10^6
CUMULATIVE FMR	0	0	0	0	0.03	0.08	0.13	0.16	0.17	0.15	0.14	FMR_{1978}

EXPENDITURE OUTSIDE THE PLAN: No expenditure outside the plan was undertaken within this area

Therefore FMQ = 100

Hertford, Ware & Hoddesdon Transportation Study

HITCHIN, LETCHWORTH, BALDOCK TRANSPORTATION STUDY

This study recommended a cumulative expenditure of £3.75 million for the six years ending 1968/1073 and a further £3.45 million for the eight years ending 1981.

However, no recommended scheme was implemented during these periods. Only one scheme A505 Gt Offley bypass was completed outside the plan at a cost of £1.32 million (1967/68 costs) during the period 1972/76.

Cumulative FMR = 0.

Therefore, Cumulative FMQ for the period 1972 to 1978 = 0

DIDCOT, ABINGDON, WANTAGE TRANSPORTATION STUDY

This study recommended a cumulative expenditure of £3.8 million to be expended over the period 1968-81. However no major principal road construction scheme was undertaken during this period within the study area.

Therefore, FMR = 0, FMQ is NOT APPLICABLE